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AGRICULTURAL.

A Boom For Farming.

It is the almost universal complaint of farmers that while they get no more and in many kinds of products less for what they grow, the price of farm labor not only increases, but is not so good as it used to be. This last half of the proposition is doubtful. Farm labor is higher than formerly, as other and better avenues of employment are opened to the active and enterprising. So many of these have removed to the cities to engage in other branches of industry that the homely and severe manual work on the farm seems less attractive than it used to be, and is avoided by most who can do so. We think that now this tendency to cities has received a check, and that the desire to get back to country life and labors is increasing. But if farmers do not take great care this tendency is likely to be checked very suddenly. Men used to city life can hardly be hired to work with clumsy and ineffective tools. They ought not to be expected to do so. And besides this they should be made to feel a personal interest in the work that they are doing, and this will greatly promote their efficiency, making their labor more profitable to themselves and their employers.

This interest can best be promoted where entire confidence exists on both sides by making the wages in part dependent on the season. The farmer hires in early spring, not knowing what the crop he grows will be worth, or even whether he will have any crop to sell. The only certainty he can see is the contract price for the labor he employs. Help hired by the week is or ought to be always paid at the week's close. But help hired by the month and boarding with the farmer's household very often needs little during the summer, and in olden times preferred to have the full amount in a lump sum in the fall. It was thus that many farmers got their start in accumulating capital, especially those who loaned their earnings on good security with interest. Money accumulates rapidly when used in this way. Very often the hired man has more saved as the result of his summer's work than his employer has been able to save after paying all the family expenses and the hired help. There is some mismanagement when this is the fact. In most cases the farmer who does not make twice as much as any help he hires is working and owning too many acres. Many farmers have a horror of selling land, and will not do it at any price that men with small means can afford to pay. They know that building lots in cities sell at high prices, and they are apt to mark up the price when any one wants to buy to as near the city limit as they think they can get.

Much more depends on the character of the purchaser than on the price he pays. An honest and industrious man who moves into a farming neighborhood makes all the property there more valuable. One who is idle, dissolute and vicious depreciates not only farm property, but all property wherever he goes. The men who talk about population making property more valuable only look at half the truth. It all depends on what kind of population is referred to. A colony of lepers or those having any contagious disease will depreciate the value of land wherever they go. If it were not so the congested quarters of all our great cities would bring the highest prices. It is rather where most money is spent on buildings and improvements that land is the dearest. Nearness to commercial centres used to be thought all important. Now the same benefit is derived from the use of telegraphs and telephones and by steam and electric cars, which build up the suburbs at the expense of what used to be the old business centres.

These same transportation and message facilities are bringing city and country in closer accord than ever before. The time is, we believe, soon coming when a great proportion of business men in all our large cities will spend a large part of their summer vacation in the country, not merely boarding, as many of them do now, but spending their whole summer or year on places which they own. When this occurs there will be less isolation in farm life, for it will be so closely in touch with some nearby city that the newspaper and most other city advantages will be accessible in the country as they now are in the city. When this time comes it must make farm lands much more valuable than they are now, and the majority of those who work them will be satisfied with fewer acres and the intensive culture which can then be given them.

Man's first home on this planet was, according to all tradition, in a garden of delights that in our Bible is called the Garden of Eden. After an experience of most varied sort, lasting many thousand years, man is again learning that to be a gardener and in close touch with nature is his happiest and safest position. Much of the cultivation of the earth in future will be under glass. It is so already in the vicinity of Boston and other large cities, where greenhouses bring the delights of the summer season into the time when all nature is wrapped in the cold of winter. We learn from our friends in Florida that even there they are preparing to grow oranges and bananas under some protection, as being cheaper and safer than building fires for that purpose. It is probably the New Englanders in Florida, who know how largely glass is used for the growing of flowers and vegetables, who introduced this to the people of Florida. If it is successful there, why cannot this method be used in many other places with equal advantage? As the hothouses in any neighborhood are increased they help to moderate the severity of cold in winter in their vicinity. So the general building of greenhouses helps those who do not use them directly.

Silos and Ensilage.

The history of the silo affords many instructive and valuable lessons. Like all new things of merit it was taken up by enthusiasts, and its advantages much overestimated. Certain results appeared to come from the feeding of silage which could not be accounted for in any other way than by the conclusion that fodder of any kind was very much improved by being placed in a silo. The advocates of the silo, believing these views, of course sought to push the feeding of silage upon the attention of the people all they possibly could. These facts on the one hand and the natural caution of the more conservative class of farmers, backed by those deep thinking people whose judgment told them there could be nothing added to the food nutrients of any fodder by placing it in a pit, and by the analysis of the chemists, led to severe criticism of the method, and bitter discussions ensued. Some of those who were opposed to silos claimed that their introduction would be actually detrimental to the live stock interests of the country, and used their utmost efforts to convince farmers that they had no use for them. These discussions tended to bring the silo more to the attention of the general public. People who were not directly interested began to think and talk about it, and in this way its introduction was hastened.

Its merits became known, it passed its experimental stage, and has so far become a permanent part of our farm economy that I have yet to find a man who has abandoned a well-built silo because of any dissatisfaction with the food it afforded or with the method.

The well-built silo, properly filled with corn or other fodder at the right stage of growth, affords a food for stock which in my judgment cannot be equalled by any other method.

There are certain facts relative to the silo that have been so well established that they need no further proof, and I believe Major Alvord formulated them very fully in some rules which he laid down in a lecture delivered in Maine in 1884.

1. Silos may be made of any of the various building materials, and some very crudely and cheaply constructed have been found to do good service.

2. Silos may be above ground, or under ground, or partly both; they should be water tight and air tight, and preferably frost proof, although the latter point is not essential.

3. The situation, form and construction of the silo, and the arrangement for filling, covering and emptying, should be largely governed by local conditions.

4. Several small silos, preferably connecting, are better than one large one, and the depth should be considerably greater than the length, width or diameter.

5. Silos may be filled slowly or quickly, in all weathers, and heavily weighted or not weighted at all, the silage produced will vary in condition and quality, but these variations of management do not very materially affect the result.

6. Any plant or vegetable product good for cattle food when green or fresh may be preserved as silage in an edible and succulent condition throughout the year or for several years.

7. As a rule all horses, mules, cattle and sheep, swine and poultry, are fond of silage, if its material is such as is ever eaten by them. Most farm animals prefer it to the best forage, and often prefer it to good roots.

8. The best time to cut any plant to make good silage is when the plant approaches maturity, and is beginning to decrease in its percentage of water content.

9. The cost of preserving a given crop as silage does not materially differ from curing the same crop by drying, in a suitable season; but crops can be ensiloed and preserved in seasons when they would be lost if drying was attempted.

10. An acre of corn as silage will weigh four times as much as the same crop dried as fodder.

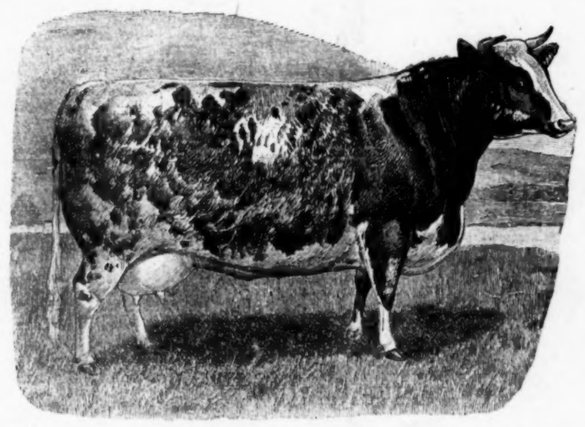
11. An acre of corn field cured, stored in the most compact manner possible, will occupy a space eight to 10 times as great as if in the form of silage.

12. In feeding the best results follow a moderate ration of silage rather than its entire substitution for dry, coarse fodder.

13. Silage, and especially good corn silage, when compared with dry corn fodder or other feeding stuff, produces results so satisfactory as to surprise the chemist, and which chemistry cannot explain.

14. A silo or two, well built, but not too large or too expensive, are convenient and economical, on most farms, to save crops which at times might otherwise be lost, if not to preserve some crops specially grown for silage.

In reviewing these rules somewhat in detail, I may say I believe that silos built of wood are preferable, that durability should not be sacrificed to cheapness, and that, generally speaking, if corn is put in the silo at the period of maturity indicated, there will be heat enough in the silage to prevent freezing. Silos built entirely above ground are to be preferred. Slow filling, without tramping, will, as a rule, insure a sweeter, lighter colored silage. Corn is the silage crop for this section of country. Silage has proved valuable to me for cows, horses, swine and poultry. Its great value comes in as a food for young stock, affording a succulent, palatable food at a period of their growth when it is the most necessary.



SHORTHORN HEIFER, BOQUET.

Silage is to be preferred to roots for all stock, sheep only excepted, and costs on our average farms not more than 60 per cent. as much as roots. The time for putting corn in the silo is correctly stated in rule eighth, and I would be inclined to let the growing process go as far as possible without danger of the silage business. I do not believe in the addition of water when filling, except in cases where the fodder is very badly dried by being frosted. The economy of space as indicated by rule eighth is a very important factor. Silage should never be used as an exclusive ration, but may be used for at least one-half of the coarse food, affording a material saving in hay. In sweet corn growing districts for the purpose of preserving the fodder and the wastes from the factories, the silo is practically indispensable.

The results obtained from feeding ensilage as compared with dried fodder have been surprising to many. We are all willing to accept the teachings of the chemist that the value of any fodder depends upon the amount of digestible dry matter it contains. We are also ready to conclude, with him, that the putting of any article into a silo cannot add to its food values.

Still, every farmer who has fed ensilage and intelligently observed results is willing to affirm that there is a value to it that the chemist does not find. This conclusion has also been reached by nearly, if not quite, all of the experiment stations where exhaustive feeding trials have been made.

Professor Henry says:

1. The losses of nutrients in the two methods of curing are practically the same.

2. There is little difference in the digestibility of corn silage and the same fodder in a dried form.

3. When areas of the corn field are compared for making milk there is a gain for the silage of from five to 11 per cent.

Averaging the results obtained by Professor Henry we find a net gain of eight pounds of food in every 100 pounds handled. When viewed in this light it should become apparent to all that the silo has an important place in our agriculture.

B. WALKER MCKEEN.
Secretary Maine State Board of Agriculture.

Spring Farm Receipts.

First—Good grafting wax. Take four pounds of rosin, two pounds of beeswax and one pound of tallow. Cut your beeswax into small pieces, break up your rosin and then slowly melt them all together. While melting stir them well, and use precaution about getting your mixture on fire. Pour the melted material into pans which have been oiled, and then set away for use. Every barn should have a special room or at least a large closet for the storage of this class of materials. Grafting wax should be annually applied not only to new grafts, but to cracks and wounds on fruit trees. When applied make it quite warm, so that it will run slightly before being applied. If in this condition it can be most conveniently and rapidly applied with a brush.

Second—Bordeaux Mixture. Take four pounds of copper sulphate and four pounds of quicklime and dissolve in a barrel of 40 or 50 gallons of water. For use on potatoes increase the copper sulphate to six pounds. This mixture is not an insecticide, but strictly a fungicide. Its object is to destroy those germs which attack either fruit or tree. It should be always on hand from very early in the spring until winter. It is often desired to use Bordeaux in connection with an insecticide; in that case add to the above mixture four ounces of Paris green or of London purple. In this case you have a mixture for destroying leaf-eating insects and those fungi that attack fruit or tree.

Third—It is advisable frequently to use a copper mixture, after fruit has developed some size, that will not stain the fruit. For this purpose use five ounces of copper carbonate and two quarts of ammonia in the same sized barrel of water. This mixture is suitable for use in a greenhouse.

Fourth—The common paris green mixture made by mixing one pound of Paris green or London purple and one pound of lime in 200 gallons of water. The quantity of lime may be considerably increased. For a fifty gallon barrel take one-eighth of a pound of Paris green or London purple.

Fifth—Kerosene emulsion is made by churning together two gallons of kerosene oil, half a pound of hard soap and one gallon of rain water. The water must be hot. Churn together until the whole is a semi-fluid mass. When you desire to use, take one pint of the emulsion to a pail of water for washing trees. Take from one-half to one-fourth of this amount when you wish to apply the mixture to such insects as hop lice. Two tablespoonfuls stirred in a pail of water will be found efficient in killing rose slugs. Some care must be taken not to apply the emulsion too strong, or it will burn foliage.

Kerosene emulsion should be applied at any time when sucking insects are at work, or when the bark of trees is affected by scab. It is both insecticide and fungicide. All of the above mixtures should be kept on hand and ready for application.

As a rule, make your first spraying of arsenical mixtures before the buds begin to break. Make the second one just after the petals have fallen, the third about ten days later, and the fourth ten days after that. In all cases it is advisable to have your first application include Bordeaux mixture, because fungi are liable to appear very soon after foliage has got well under way in the spring. It will always do a vast amount of harm before it is detected. Fungous development must be looked for at almost any time throughout the summer, according to the weather. Whenever the conditions are favorable it will be developed one year on the apple trees, another on grapes and another on plums.

The application of sprayed mixtures is very largely increasing. No one can succeed in fruit growing without he accepts of the necessity. The apple we must spray for the codling moth, bud moth and scab. The cherry must be sprayed for rot, for aphis and for slugs. The curculio must be dealt with by jarring. The currant must be sprayed for mildew and with hellebore solution for worms. With this mixture apply a portion of kerosene emulsion. The gooseberry treat as you do the currant. The grape should be frequently syringed to prevent fungous diseases of different kinds. The peach needs fungicide for leaf curl and mildew, as well as rot of the fruit. Deal with your pears very much as with your apples. The plum should be syringed for aphis and for fungous diseases. Spray your potato for scab and for blight. The raspberry and blackberry spray for anthrax, but dig out the red rust and burn it. Spray your strawberry for rust. Spray your tomatoes for rot and blight, and your roses for mildew, slug and aphis.—E. P. Powell, in New York Tribune.

The Orchards in Spring.

No time of the year requires more intelligent work than the spring to make visible results in the bearing of the trees and vines. The work needs to begin early, and it should be conducted well through the growing season until the crops are harvested. More and more are successful orchardists becoming convinced that there is money in all of our fruit crops, from strawberries to apples, if proper attention and cultivation are given. We are raising up as a consequence a generation of fruit growers who get the most possible out of their orchard trees at the minimum of risk from blights, insects and other pests. We no longer recognize off years in the orchard; years when the crop is next to nothing, while the following season's crop is so large that the markets are glutted and prices very low. By careful cultivation, pruning and thinning out, the old-time trees that used to produce big crops in alternate years now yield a fair crop every season. If they won't do this, then root them up and plant varieties that will. To make orcharding successful we must be able to depend upon a good crop every season, and there are plenty of trees that will do it for us. But if you let the trees take care of themselves, they will do as they used to do, produce such a big crop this year that their vitality will not be up to the mark of yielding much fruit next. So they will take a season off, and the owner will say this is the off year for his apples.

By pruning, thinning out and fertilizing our orchards we strike at the very secret of the success of the trees. In pruning we keep the vitality of the trees in proper limits. It is not allowed to spread itself out in dozens of useless and formless twigs and limbs. By keeping the trees into a certain form and symmetry we conserve their powers and energies. Likewise in thinning out the fruit we enable the tree to send all of its vitality into the few fruits left, and they are larger and fuller in every way. Some parts of a tree are permanently ruined by permitting too heavy loads of fruits to mature on them. Let the bearing be as even and uniform throughout the tree as possible, and the fruit will be better for it this year and succeeding years. There is a great art to be learned in thinning out the fruits of any orchard, and the secret of it all must be learned by intelligent experience. Then there is the need of adding fertilizers to the soil of the orchard. Plow and harrow and summer fallow until July. Then put in some chemical and green crops to be incorporated into the soil later. A couple of hundred pounds of muriate of potash and acid phosphate added and plowed under with a crop of clover or rye would work wonders in an orchard. It would not take many years to notice the change in the size and quality of the fruits produced. S. W. CHAMBERS.

New York.

The Silo's Construction.

Under ordinary conditions the silo is a practical and economical method of preserving fodder, but in its construction one should strive to reduce the amount of losses to the lowest possible amount. There are very few silos that are absolutely perfect, that is, as air tight as a fruit can or jar. That, however, is what every one is laboring to do when he builds one, and the nearer he approaches this ideal the less will his loss prove. The more successful we are in keeping the air from the body of the fodder after it is cut and stored away, the less likely will it be to decay or lose any of its nourishing qualities. Leave the fodder exposed to the air and it dries up, and with the evaporation of the moisture from it a good deal of the nourishing elements will disappear also. If a small loophole is allowed in the silo destructive fermentation soon begins, and this can be checked only by shutting out the air. Cracks and knot holes are therefore the weak points in every silo, and more than one large mass of ensilage has been ruined through ignorance or neglect of these.

In selecting the corn or other fodder for the silo, it is quite essential that it should have arrived at a certain stage of maturity. Chemical changes begin in the silo shortly after the fodder is put in, even if the place is absolutely air tight, and these changes must be allowed for. Fermentation of a certain order must begin, and the heat of the mass will increase so as to cause this. The more water there is in the ensilage, the greater will these chemical changes be, and in some instances they would destroy the fibre of the food. Corn cut before it has properly matured, indicated by the glazing or denting of the kernel, has too much water in it to make good ensilage. When pressed into the silo, the water is forced out of the stalks and settles gradually at the bottom of the mass. This great mass of water at the bottom of the silo always causes trouble, and in nine cases out of 10 produces sour ensilage. Sometimes the sourness may not extend far up, but it is pretty sure to cause more or less mischief.

Besides this, young corn fodder is deficient in the full amount of nutriment. On the other hand if we let the corn get much beyond the stage of maturity indicated, there will not be sufficient water in it to preserve it. The stalks will be stiff and unyielding, and they will not be pressed down solid enough to make a compact mass. The result will be that there will be too much air in the silo and mould is very apt to form. These few points in regard to the silo should be watched and guarded against carefully, if we would have perfect ensilage for next winter's feeding.

A. E BARRETT.

Dogwood, and Killing it Out.

The variety of the sumac family that is known in different localities under various names, such as "poison sumac," "poison oak" and "dogwood," is exceedingly plenty in some of the swamps of eastern Massachusetts. In some instances this wood makes nearly half the shrub growth. Its graceful central tufts of flowers and seeds make it quite attractive, and after the early frost the brilliant gold and scarlet color of its leaves has led many an unwary one to gather them, to their after great personal sorrow.

The subtlety of the poison emanating from this plant is something wonderful. There are well-authenticated instances where persons have been affected by it when they have never come in contact with the plant itself. An album of colored leaves was once handed to a botanist acquaintance of mine, with the request that he would examine it to see if there were any poisonous leaves in the collection, as several who had handled it had been poisoned, and could not trace their affliction to any other source. A glance brought to light several leaves of the dogwood, brilliant in their scarlet and gold attractiveness.

It certainly is to be regretted that there is not, in our system of school studies, a department giving sufficient instruction relative to what is and what is not poisonous among our native animals, insects and plants, to enable the student to protect himself from all harm, and, at the same time, prevent unnecessary fear.

While a member of our Massachusetts Senate, nearly a quarter of a century ago, I got a proposition embodying this idea through the committee on education, but there it stopped. The utter ignorance and consequent helplessness in this department of knowledge on the part of those who have received the best that education can do in other departments, I once saw strongly illustrated in the case of a young man who is now one of the most eminent lawyers of New York city.

He invited me to admire a large bouquet, which he had just collected, made up of wild flowers and ornamental growths from the swamp near by. When I told him that his fine centrepiece was the poisonous dogwood, he dropped the mass instantly, exclaiming with chagrin, "Why, I got terribly poisoned by that last year!"

Now, as to the matter of exterminating this nuisance, my experience, though limited, has given me some striking results. Several winters ago I put on a pair of mittens, and armed with an axe, went into one of my swamps and cut down every clump of dogwood in it, being very careful not to come in contact with the fresh-cut wood, either by hand or face. I found some specimens fully six inches in diameter. The effect of that cutting must have been not far from extermination, for in my rambling over that region in recent years I have not noticed a single live specimen.

J. J. H. GREGORY.

Marblehead, Mass.

Live Stock Notes.

The Western pork growers, who raise pigs primarily to consume a part of their corn crop, look upon the fattening of pigs and the consequent increase of their bank account as of only secondary importance, merely incidental to the first. They like, if they have a number of brood sows, to have them farrow nearly all at one time, first, because when turned into one pasture or divided into two all that are together may be nearly equal in size, with no weaklings to be crowded out by older ones, and next that they may have a carload to sell at one time nearly uniform in size, as they know that such a load brings more than one of mixed weights varying in size, fatness and shape.

But the Eastern farmer who keeps two or more brood sows, expecting to find a profit in selling pigs to his neighbors who want one or two each year to eat up the wastes of the house and the refuse from the garden, and to furnish pork for the family use, will do well if he has some interval between their farrowing. Not every buyer will be ready at the same date. Money considerations or other reasons may lead some to prefer to wait longer than others. We used under such conditions to have pigs for sale for several weeks, and having fixed upon a price, whether it was $5 each or less, the first buyer had his choice, and so did those who came late, and the last man sometimes got the largest and best pig of the lot because we had fed it longer. This was, of course, after we had selected out such as we wanted for breeders, and placed them where they would have feed more conducive to growth of frame and less adapted to rapid fattening.

And we were not afraid by this system of having runt pigs left on our hands. If the parents were good ones and well cared for the pigs would be nearly uniform, and we have had a buyer when given his choice say "Any one of them. One is as good as another for all I can see." But if one was a little smaller framed than another we were usually willing to keep it, for we thought by liberal feeding we could fatten it quickly, and if we had not as heavy a hog at slaughtering time as some of those had who took first choice from the litter, we had not much doubt that we made our pork as cheaply as they did.

Mr. T. B. Terry tells in the Practical Farmer some of the experience of Hon M. F. Greeley of South Dakota in caring for sheep. When he went there from one of the Eastern States, he thought to do better than some of his neighbors by giving his sheep better care. They fed twice a day, and he decided to feed his four or five times, and the neighbors' sheep beat his every time. Now he feeds only twice a day, at 8 A. M. and about 3 P. M., or a little earlier if they begin to stir around and look for it, and he raises as good sheep and lambs as any of them. He pastures his grain fields of wheat and rye in the spring with sheep, and gets better crops by so doing, as he has proven by letting them have but a part of the field. When he or his neighbors have done so the part fed down has always yielded the best crop. But his soil is light and loose. We would not advise doing so on a soil that would pack hard if sheep traveled over it. He grows grains for his sheep, but does not thresh it, feeding grain and straw together and cutting before they are mature. He mixes a peck of wheat and a handful of flaxseed with each bushel of oats sown, to get hay for the sheep. Feeds the sheep out of doors in winter all but perhaps a half dozen days of bad weather, but houses them nights, closing the shed more or less closely according to the weather.

AGRICULTURAL.

Dairy Notes.

When the milk of one cow is tested at every time she is milked, there will usually be found a considerable variation between her best and her poorest production, due, probably, to her physical condition, and perhaps to circumstances not under the control of her owner. A fright or excitement of any kind, or any trouble with the digestive organs, may reduce the amount of milk given or the amount of butter fat in it, more usually the latter, but often both. The only true test then is a record made for a week or longer at each milking. This record will usually in its average show very nearly the normal production, unless she is for the entire time suffering from disease or some other cause. Even the results of testing an entire herd are not absolutely conclusive from one or two tests. While it would, perhaps, equalize matters some by eliminating difficulties that might occur to one cow, there may be conditions that would affect the entire herd. The presence and worrying of one cow in heat, a fright from a strange dog or other animal, a thunder shower, or a cold wind may affect all of them unfavorably, and, as a usual result, the best cows will be the most disturbed, because they are the ones of the most nervous temperament. We do not want cow, horse or man that is not nervous, not in the sense of weak nerves, but rather of strong nerves, that will enable them to perform extraordinary feats under strong excitement. The powers of a wooden man or a wooden animal are limited, but a live one can be expected to vary in ability as the conditions that surround it are varied.

We think the best floor for the stable is a cement floor, made nearly level, but with a slight slope from front to rear, and but a shallow gutter at the lower side to carry away liquids to some point where they will discharge into the manure heap or into a cistern provided to receive them. We prefer the former plan when practicable. Then for each stall we would cut timber about two inches square, and as long as the stall was wide, and on three of these nail plank as long as the animal we expected to stand on them, with a narrow space between the planks to allow the liquids to drain through to the cement floor. These stall floors we would have so that they could be shoved under the manger at the upper end to accommodate a longer or shorter animal. With the two-inch joist and two-inch plank we would have a drop of four inches behind each animal, and the length being just right this would be enough for purposes of cleanliness. Thus we should have a plank floor for the animals to stand upon, and beneath it a floor that would not absorb moisture or retain unpleasant odors; one that we could sweep or even wash when we desired, and one that would be likely, if properly made, to outlast many of the plank stall floors. And by the way, these last could be made much more durable if they were taken out and exposed to sun and air once or twice during the summer. We almost forgot to mention that the joist at the rear end of the planks, and even all of them, should not fit so snugly to the cement as to prevent the free passage of water under them, and it may be desirable to turn them end for end after giving the sunning and airing spoken of, as most of the wear coming at the rear end, this would double their durability.

When it becomes necessary to procure a new churn for the dairy, get one with a marked capacity at least one-half larger than the quantity of cream that is expected to be churned. We never saw a churn of any pattern that did not do its work better when from one-half to two-thirds full than when more was put in it. We have some prejudice against those churns which have paddles or other arrangements inside, though the best one we ever used was built so, and we made good butter and salted it and worked it in the churn. But that was before we ever saw an oscillating churn or swing churn, and when we saw one of those we quickly decided that they were on the right principle, easier to handle, easier to keep clean and sweet, and less liable to injure the butter.

At a buttermakers convention in Nebraska Mr Vind of Minnesota gives directions for making a starter for ripening the cream which are, perhaps, as good as any we have seen. As Mr. Vind is a graduate of a dairy school he may be considered to speak as an expert:

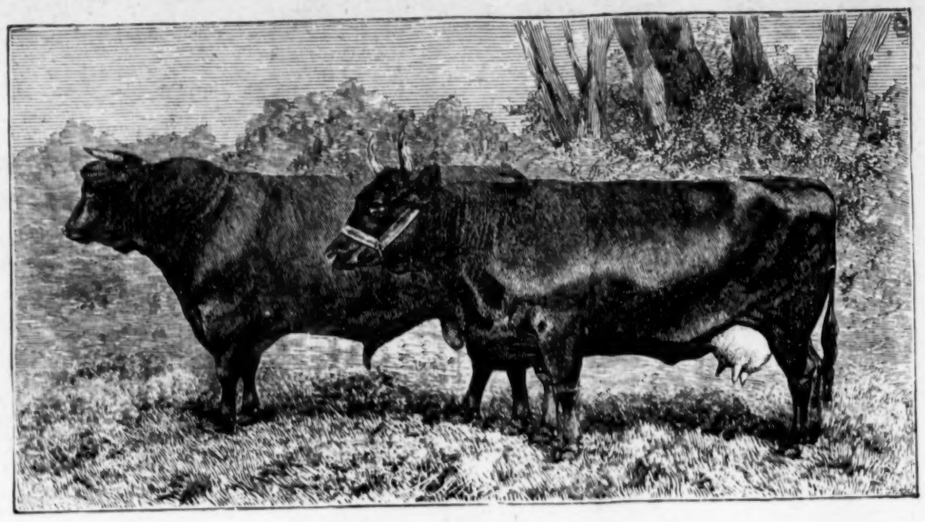
Fill about half a dozen quart bottles with milk from as many patrons, taking what appears to be the best on that day. Keep these bottles at 70° for 24 hours, skim off the cream with a spoon, shake, smell and taste of them, and add the best to a can of pasteurized skimmilk. Keep this skimmilk at 70° to 80° until sour, skim off the top, but before adding to the cream, save out a bottlefull with which to propagate next day's starter. Keep that bottle in ice water until ready to use it, so as not to let it become over-ripe, then sour another can of skimmilk with it, as before. We can in this way perpetuate the same starter for one or two weeks, until it degenerates, when new samples are taken.

"It is well to stir the starter a few times the first hour or two. But be careful not to shake or stir it while it is coagulating, as that will spoil the curd. If this should happen, such a starter must be strained carefully before adding to the cream, for this curd will produce white specks in the butter. A properly ripened starter need not be strained; pouring it from one can to another a few times should give it a smooth consistency like thick cream.

"Never let a starter become overripe. It is best right after it is coagulated, and if we are not ready to use it should be cooled to 48° or 45°, at which temperature it will keep a day or two without deteriorating. Properly ripened milk of a good flavor keeps better at a low temperature than sweet milk does. Therefore in the winter, when we only take milk every other day, it is better to ripen the starter the first day and then cool it, than to cool it first and ripen it the second day. But in this case do not skim off the top of the starter until ready to pour it into the cream vat, or else skim it again, because the top will always become somewhat contaminated.

"The percentage of starter to use depends on the quality of the cream. The poorer the cream the more starter should be used; but if the latter is good, we can never use too much, unless it makes the cream too thin to churn. Ten to 20 per cent. is the amount most generally used.

"If we are troubled with a bad flavor in the butter, which the ordinary amount of starter is not able to check, the following method may be used to advantage: Ripen about one-third of one day's cream into a separate vat or can, add to this about 50 per cent. good skim milk starter, and ripen it at a favorable temperature, say 66° to 68°. As soon as it coagulates, cool it to 48° to 46°, and keep it there until next day. Then use this cream as a starter for two-thirds of that day's cream, and treat one-third as the day previous. This enables us to use 50 to 60 per cent. starter and yet add about 15 per cent. skimmilk to the cream. And such a large amount of starter, I have found, will check a rather bad taint. The cream which is used as a starter to advantage may be pasteurized lightly, say to 150° for a minute, and the starter added as soon as cooled to 70°. That may not pasteurize it very thoroughly; but it will give the starter much more power.



SOUTH HAMS BULL AND COW.
First Prize Winners in English Shows.

Butter Market.

Under the influence of heavier receipts the prices of butter have declined at least one cent a pound on extras, one and a half cents on firsts and extra dairy, and two cents on seconds and low grades. This is the case with boxes and prints as well as in tubs and firkins. This has caused a better demand, which may help to check further decline for a short space of time, but it is not safe to predict unless you know. Extra creamery sold readily at 18½ to 19 cents for Western large ash tubs, and nearly all others went at 19 cents. Boxes and prints are in fair supply, but sold readily at 19 to 19½ cents for extra Northern creamery, 19 cents for Western and 17 cents for dairy. Those classed as common to good dropped to 15 or 16 cents. Northern firsts sold at 18 to 18½ cents, with not many lots above 18 cents. Western was a half cent lower. Eastern at 17 to 18 cents and seconds were at same figures as renovated, 16 to 17 cents. Dairy butter in liberal supply Vermont and New York extra brought 17 cents, firsts 16, and seconds 15 cents, with low grades at 14 cents. It is said some fancy selections reached 17½ cents, but we could not find buyer or seller who would prove it. Imitation creamery are from 15 to 16 cents, and ladies scarce at 14 to 15½ cents.

The receipts of butter for the week were 16,741 tubs and 31,684 boxes, a total weight of 856,261 pounds, against 797,654 pounds the previous week, and 794,731 pounds the corresponding week last year. This shows an increase of 120,793 pounds as compared with the week previous, and brings the amount above the average weekly consumption for the past month or two, but the low prices have increased the consumption and our trade ought now to be able to take care of about 900,0000 pounds or more per week. Receipts for Monday and Tuesday of this week are a little larger than the week previous.

There were no exports of any consequence from Boston, New York or Montreal last week. For the corresponding week last year Boston shipped 12,316 pounds.

The Quincy Market Cold Storage Company makes the following stock statement for the week: Put in 15 tubs, taken out 584 tubs; stock 1387 tubs, against 3752 tubs same time last year. The Eastern Company reports a stock of 105 tubs, and with this added the total stock is 1492 tubs, against 4217 tubs same time last year.

Vegetables in Boston Markets.

An advance along nearly the whole line in vegetables, as receipts from Southern points have been light, and hothouse goods which should have taken their place do not mature as they were expected to do. Winter vegetables also are a little higher in many cases, as they should be to pay for holding them so late and standing shrinkage by decay or other causes. Old beets are 50 to 60 cents a box, and new $1.75 a dozen bunches. Old carrots 65 to 75 cents a bushel, and new $2 to $4 per hundred bunches. Parsnips $1.25 to $1.50 a bushel. Good flat turnips 40 to 50 cents a bushel. White French $1.25 a barrel, and yellow $1.15 to $1.25. St. Andrews 90 cents to $1. Good sound native onions bring $2 to $2.25 a barrel, and Havana or Bermuda $1.25 to $1.75 a crate, and most Bermudas bring the higher figure. Leek are 75 cents a dozen, and chives $1. Radishes 30 to 35 cents a dozen. Cucumbers are higher at $9 per hundred. Hothouse tomatoes 20 to 22 cents a pound, and Southern $2 to $3.50 a crate. Egg plants scarce at $4 to $5 a box. Shallots $1 to $1.25 a dozen, artichokes $1.25 a bushel, rhubarb 9 cents a pound, and Carolina asparagus, large bunches at $3.50 to $5 a dozen, with some small white at $2 to $3.50.

Old cabbages are $2.50 to $3 a barrel, and new Florida at $3.50 to $4 a crate if choice. Hothouse cauliflower $5 a dozen. Lettuce three dozen boxes at $1.50 to $2. Norfolk spinach from 75 cents to $1.50, but none very good at less than $1.25. Good kale selling well at 75 cents to $1 a barrel. Dandelions $1.12 a box, and beet greens 75 cents to $1. Some native endive comes in, rather poor, at $1 to $1.25 a box, but there is imported endive that sells for $3. Parsley in demand at $1.50 to $1.75 a bushel. Florida string beans are $3 to $3.50 a crate for choice, with poor to fair at $1.50 to $2.50. A few peas in today sold at $5 a crate. Mushrooms are 75 to 90 cents a pound; Hubbard squash, $40 to $45 a ton.

Potatoes in over supply and lower. Aroostook Rose are 45 to 50 cents a bushel, Hebron 50 to 53 cents, Green Mountains 55 cents and Dakota Red 43 to 45 cents. Other Hebrons and Green Mountains 50 cents, New York Rurals 50 cents and long white 45 cents. Sweet potatoes in small supply and Jersey in double-head barrels are firm at $3 to $3.50.

Retail Prices Boston Markets.

The supply of seasonable game is growing scarcer, the closed season for all kinds of wild ducks going into effect April 15, which will cut off this supply. Fresh-killed English snipe are coming in from the West, and are costing $2.75 to $3 per dozen, with grass birds at $1 to $1.25 per dozen, and reed birds at 50 to 75 cents. The supply of venison continues light, but legs are yet quoted at 35 cents per pound, and loins at 38 cents, while steaks, when available, cost 50 cents per pound. Quail continues in fair supply, with the range at $2.50 to $3 per dozen as to quality. For Western grouse the price continues steady at $1.75 per pair. Fat coons cost about $1 to $1.25 each.

The supply of poultry on the market continues liberal, with prices about steady. South shore roasting chickens are costing 23 to 28 cents per pound as to quality. Fresh incubator broilers remain at $1 to $1.25 per pair, with Western frozen roasting chickens at 18 to 20 cents per pound. Choice Jersey capons are yet costing about 23 to 25 cents per pound, with Western capon at 20 cents. The cost of choice young turkeys continues at about 18 to 20 cents per pound, with the range down as to quality. Choice geese are costing 18 cents per pound, with the range down, with choice ducks at 15 to 18 cents. Choice ducklings yet available at 35 to 40 cents per pound. The price for choice fowls is 15 to 16½ cents per pound, the latter fresh killed Northern. Tame quabs are lower and cost $3 to $3.50 per dozen, while tame pigeons are costing $1.75 to $2 per dozen. The price of sucking pigs remains unchanged, they costing $1.50 to $3 each, as to size.

Lambs and veal hold about steady in price with calves' liver lower. Strictly spring lambs remains at about $4.50 to $5 for hindquarters, with forequarters at $1.75 to $2.50 each. Hindquarters of fall lambs are costing about 16 to 18 cents per pound, with forequarters at 10 to 12½ cents. For choice loins the price is about 20 cents per pound. The cost of choice veal sweetbreads continues at 50 to 75 cents with heads about 25 cents each, while calves liver cost about 50 cents each. Short chops from lamb or fat mutton are yet costing 25 cents per pound, with long chops at 17 cents. The cost of choice cutlets of veal continues at 30 cents per pound, while a fillet of veal is yet being sold at 16 to 20 cents per pound, while a leg will cost 20 cents per pound. Loin chops remain at 25 cents per pound.

There is a steady market for fresh beef, with prices about the same. For choice porterhouse steak the price remains at 25 cents per pound, with sirloin at 23 cents, while for the first cut of the rib about 20 cents per pound is the price. The range for roasting cuts is from 25 cents for porterhouse down to 16 cents for chuck roast. The price of round steak holds at 23 cents for the top of the round, while a cut across the round, taking in both top and bottom, is quoted at 17 cents, with bottom of round at 12½ cents, while for the face of the rump the price is from 15 to 16 cents per pound. Corned tongues are costing 15 cents and smoked tongues at 18 cents per pound, fresh at 15 cents and saltpetred at 15 cents; corned beef is steady at 8 to 11 cents per pound, the latter for fancy briskets.

The butter market is well supplied, arrivals being liberal, and prices are quoted lower. For best creamery cut from the tub price is 27 cents per pound, with dairy at 23 cents and lower grades at 18 to 21 cents. For 5-pound boxes the best creamery is costing $1.40, with dairy at $1.10 to $1.20. Fancy prints are worth 30 cents per pound for creamery and 28 to 25 cents for dairy. Factory cheese remains at 16 to 18 cents per pound for choice, with cream cheese at 20 cents. Edam cheese costs 85 to 90 cents, with Roquefort at 35 cents per pound. Club cheese ranges from 16 to 20 cents per package. Swiss cheese costs 28 cents per pound, with Eam cheese at 10 cents per package. The egg market is well supplied at first hands, and retail prices are lower. Best hennery eggs, 23 cents per dozen, with Capes at 20 cents and fancy Western at 18 cents. Pekin duck eggs are costing 33 to 35 cents per dozen, with geese eggs at three for 25 cents.

There is little new offering in the fish market, with general prices about steady. Fresh shad are costing 20 cents per pound, with shad roes at 30 cents per pound. Brook trout are steady at 50 cents per pound, with bluefish at 15 cents, while fresh Penobscot salmon are costing $1.25 a pound, with Western at 30 cents. Striped bass remain at 30 cents per pound, with cod and haddock at 10 cents per pound and haddock roes at 15 cents. Soft-shell crabs steady at $1 per dozen, and chicken halibut at 30 cents per pound. For live lobsters, 16 cents per pound is the price, with boiled at 18 cents. Red snappers are costing 20 cents per pound, with large mackerel at 35 cents each and Spanish mackerel at 35 cents per pound. Shrimp are costing 40 cents per quart, with sheepshead at 15 cents per pound. Terrapin are costing $2 each, white bait at 50 cents per pound and oyster crabs at $2.50 per quart. Fresh oysters are steady at $1 per gallon for standards and $2 for Rocky Points. Florida pompano remain at 35 cents per pound.

Apple Export Trade.

The total apple shipments to European ports for the week ending April 14, 1900, were 3552 barrels, including 3314 barrels to Liverpool and 238 barrels to London. The exports included no barrels from Boston, 391 barrels from New York, 1437 barrels from Portland and 1724 barrels from Halifax. For the same week last year the apple shipments were 2483 barrels. The total shipments thus far this year have been 1,266,644 barrels, against 1,220,807 barrels for the same time last year. The shipments in detail have been 177,131 barrels from Boston, 293,189 barrels from New York, 148,286 barrels from Portland, 289,916 barrels from Montreal, 278 814 barrels from Halifax, 12,331 barrels from Annapolis, N S, and 59,977 barrels from St. John, N B.

Boston Exports and Imports.

The exports from Boston for the week ending April 13 were valued at $803,712, and the imports at $2,239 822. Excess of imports $1,436,110. For corresponding week last year exports were $2,153 800, and imports were $1,110,963. Excess of exports $1,042,837. Since Jan. 1 the exports have been $28,199,794, and imports have been $25,275,092. Excess of exports $2,924,702. For same part of 1899 exports were $39,945 458 and imports were $17,547,993. Excess of exports $22,397,465. Of the week's exports $634,235 went to England, $40,390 to Nova Scotia, and the other Provinces, $14,27 3 to Newfoundland and Labrador, $25,831 to Sweden and Norway, $15,983 to Mexico, $14 653 to Russia, $10,890 to Argentine Republic and small amounts to other counties. The principal articles of export were provisions $160,747, breadstuffs $275,880, live animals $110,890, leather and manufactures of same $58,077, sewing and other machinery $40,984, paper $35,008, wood and manufactures of same $29,477, drugs and chemicals $21 719, agricultural implements $22,574 coal $15,933, iron and manufactures of same $8095, cotton manufactures $4296, cordage and twine $4255, books $3676, hops $3414, sugar and molasses $3025.

HISTORICAL.

——King's Chapel Burying Ground was the first place for interments in Boston (1630) Many of the early colonists and patriots were buried there.

——It is not generally known that twelve former Presidents of the United States, at the earnest solicitation of Edward Cornelius Delevan of New York, appended their names to the following "temperance declaration": Being satisfied from observation and experience, as well as from medical testimony, that ardent spirits and drink is not only needless, but hurtful, and that the entire disuse of it would tend to promote the health, the virtue and the happiness of the community, we hereby express our conviction that, should the people of the United States, and especially the young men, discountenance entirely the use of it, they would not only promote their personal benefit, but the good of our country and the world. The Presidents so signing were: Andrew Jackson, James Madison, John Quincy Adams, Martin Van Buren, John Tyler, James K. Polk, Zachary Taylor, Millard Fillmore, Franklin Pierce, James Buchanan, Abraham Lincoln and Andrew Johnson.

——The site of Washington square in New York, up to recent years the centre of New York fashion, was a dilapidated cemetery until 1828. Therein all persons who were too poor to purchase graves in the churchyards came and buried their dead. The interment law, enacted in that year to forbid all burials within the city, compelled its closing. It was then levelled and the square laid out. Before this period, however, previous to 1806, the site was a Potter's field, and had been known as such as long as the oldest inhabitant remembered. Apropos to Potter's field, New York once had a Potter's Hill, alias Potbaker's Hill, now leveled down and obsolete. It stood by the shore of the "Collect," and at its foot flowed the Oude Kill. Here, somewhere between Chambers and Reade streets, a pottery had been founded at a very early period. Last century it was in possession of the Crolius family, and the ancient establishment had given its name to the locality.

CURIOUS FACTS.

——Orphanages and destitute orphans are alike non-existent in Australia. There every waif is taken to a receiving house and kept till a country home is found for it.

——South Africa is of volcanic origin, and the land in the vicinity of Kimberley is so sulphurous that even ants cannot exist upon it.

——All the flags for British ships of war except the royal standards, are made in the government dock yards, and the enormous number required may be judged from the fact that in the color loft at Chatham alone about eighteen thousand flags are made in a year.

——Some of the wooden churches of Norway are full seven hundred years old, and are still in an excellent state of preservation. Their timbers have successfully resisted the frosty and almost arctic winters because they have been repeatedly coated with tar.

——A curious fishing wheel is used on the Columbia river, near Portland, Ore. It is fixed near the bank of the river, a place being selected where the river is most rapid. The wheel consists of three receivers. These are enclosed on three sides by wire netting, and, as the wheel revolves by means of the current, each receiver is submerged beneath the water, and scoops up the salmon as they jump in the rapids.

——The clock on the Philadelphia city hall is the highest in the world, and has the largest dials. If the dials were removed, there would be space for two trains to pass each other, running through. The glass in the four faces is fastened by a ton of cement. The glass, if laid on the ground, would make a walk a square long and ten feet wide. The minute hand finished its year's journey on New Year's day by completing a 110-mile trip.

——After the unfortunate war in South Africa is over, a scientific problem of much interest will be presented to the engineers of the Transvaal gold mines. Some of the shafts recently opened on the Rand are expected to go down four thousand or five thousand feet in search of gold-bearing veins, but in the future, Mr. John Yates says, it may be necessary to descend twelve thousand feet. That he thinks will be about the limit of depth at which men can work because the temperature there will be at least one hundred degrees Fahrenheit. Other engineers think the shafts could be sunk several thousand feet lower through the adoption of devices for cooling the air.

BRILLIANTS.

If we see right, we see our woes;
Then what avails it to have eyes?
From ignorance our comforts flows;
The only wretched are the wise.
—Prior.

Of it is excellent
To have a giant's strength; but tyrannous
To use it like a giant. —Shakspere.

French as we will in this wrong world of ours,
Man's fate and woman's are contending powers;
Each strives to dupe the other in the game,—
Guilt to the victor, to the vanquish'd shame!

Sorrow concealed, like an oven stopped,
Doth burn the heart to cinders.
—Shakspere.

The surest way to health, say what they will,
Is never to suppose we shall be ill.
Most of those evils we poor mortals know,
From doctors and imagination flow.
—Churchill.

Through tattered clothes small vices disappear;
Robes and furred gowns hide all. Plate sin with gold
And the strong lance of justice hurtling breaks;
Arm it in rags, a pigmy's straw doth pierce it.
—Shakspere.

Pleasure that comes unlooked for is thrice welcome;
And, if it stir the heart, if aught be there,
That may hereafter in a thoughtful hour
Wake but a sigh, 'tis treasured up among
The things most precious! and the day it came
Is noted as a white day in our lives.
—Rogers.

Oh! too convincing—dangerously dear—
In woman's eye the unanswerable tear!

There's not the smallest orb which thou beholdest
But in his motion like an angel sings,
Still quiring to the young eyed cherubims;
Such harmony is in immortal souls,
But while this muddy vesture of decay
Doth grossly close it in we cannot hear it.
—Shakspere.

AN EASY WAY TO CURE MEATS.

Hickory Wood Smoke Reduced to Liquid and Applied with a Brush.

The tedious and oftimes offensive method of curing meats over the smudge fire of the smoke house has a most cleanly, economical and convenient successor in Krauser's Liquid Extract of Smoke. It is made from selected, clear hickory, the wood that gives meat such a sweet, delicious flavor and preserves it longest. The extract is applied with a brush or sponge,

and in a few minutes covers the meat more thoroughly than the smoke could if wood were burned under the meat for weeks. The protection against insects is perfect and it keeps better; the meat is much more cleanly and healthful, and it can be put on the market much earlier than meat cured in the old way. Liquid Extract of Smoke is manufactured by E Krauser & Bro., Milton, Pa., who will be glad to send information. It is in general use throughout the United States, though it has been manufactured but a few years.

"The Man With the Rod."

It is conclusive evidence that the regular spring fishing season is close at hand when the salmon begin to rise in "Bangor Pool." The first rise was heralded a few days since, and its announcement has served to sharpen the impatience of the anglers, who are anxiously awaiting the report of the disappearance of ice from the great lakes and ponds of northern and eastern New England.

Many take a keen delight in reading of the piscatorial exploits of their friends, even though they themselves are never able to get within a hundred miles of the fishing region.

The modern fishing trip, in the accepted sense of the term, has been reduced to something like an exact science; and yet, with all its exactitude of detail, it is the "same old story, nothing new."

There is a curious fascination in the sport, and the hours spent in preparing the tackle, selecting the flies and baits, and getting into shape the paraphernalia and traps so necessary to the fisherman, are hours of pleasure which he delights to gloat over. Though in business he may be of nervous temperament, and forever hustling, with the advent of spring he becomes a follower of "Walton," and then all is changed. For hours he will sit through wind and sun casting his line first this way and then that, ever changing his flies with the hope of increasing his luck. His preference may, perhaps, be brook trouting, and if that is the case, many is the mile he will cautiously travel, ever, like the "Absent Minded Beggar," thinking of but one thing, and that, what will be the size of the fish he is to land?

The fisherman is a source of terror to the trout and salmon, and it is the battle royal that the finny one puts up that makes the sport so eagerly sought. Then too, the spring air is like a balm, so wonderful is it that wind and weather go for naught, and every thought and care is forgotten. And you ask where does the sportsman go for his season of fun, and the answer is, Northern New England.

With the great wealth of lakes, brooks and streams, a priceless heritage of New England, it will be impossible to describe in detail the seductive haunts of the trout, togue and landlocked salmon.

One of the regions which holds first place in the affections of the larger number of fishermen is the Rangeley Lake country in Maine. In this region, famed for possessing large and gamey trout, are to be found every condition that goes to make up the ideal fishing resort, and the transportation facilities to this regal region are everything that you can ask for. The same is applicable to the train service to the other fishing sections of Maine, including Dead River and the Moosehead regions, both of which may be comfortably reached.

The togue out of Moosehead Lake a little later than from the Rangeley system, as a rule, and its fame as a fishing centre is world wide. Beyond Moosehead again is the northern Maine region threaded by the Penobscot, Aroostook, Allegash and Fish Rivers, fairly teeming with trout, salmon and other game fish.

In the Washington County recently opened up to railroad travel, there is a promising series of lakes and streams, and Sebago Lake not far from Portland affords fishing grounds which are accessible and should not be overlooked.

In New Hampshire is Lake Winnipesaukee well stocked with lively trout and black bass; as are Winnisquam, Sunapee, Newfound, Dublin, the Connecticuts, and other well known lakes are widely known and often visited by early fishermen.

Vermont presents Memphremagog, Champlain and Willoughby Lakes as choice fishing grounds, and Massawippi is also a well stocked sheet of water just over the border in Canada.

Those desiring more detailed information regarding the numerous fishing resorts of New England have only to write to the General Passenger Department of the Boston & Maine Railroad, Boston, Mass., for the illustrated 1900 edition of the "Fishing Hunting" which will be issued about May 1. It will be forwarded to any address upon receipt of two cents in stamps.

The proper place of the silo on every farm and the value of ensilage has been so frequently advocated in these columns that it is not our purpose now to more than re-emphasize the whole subject. Doubtless many are deterred from building a silo through the idea, which very generally obtains, that a silo is an expensive luxury, obtainable only by those of large means. However, our attention has been called to a little pamphlet sent us by the Williams Manufacturing Company, Kalamazoo, Mich., which illustrates by photographic views their line of "Kalamazoo Silos" which are favorably known wherever introduced. They are cylindrical and of varying capacity. Although made of either larch or white pine, the manufacturers make a specialty of Washington Red Cedar, which seems to resist the action of the elements from without and the chemical products generated by the ensilage from within. An interesting instance of the indestructibility of this material is shown by a photograph of a red cedar log, still sound and solid, which fell in the the forest centuries ago, so long ago, in fact, that another cedar has sprung from either side and grown like an arch over it to a diameter of eight feet. This certainly endorses red cedar as the best material for stave silos. But send for the booklet and learn further particulars about their line. Address Williams Manufacturing Company, Kalamazoo, Mich., and mention this paper.

——The finest collection of fans in Europe is said to belong to the Baroness James Rothschild. The next most famous are those of ex-Queen Isabella of Spain, who has over eight hundred fans of all periods and styles, and the Dowager Empress of Russia, who is constantly adding to her treasures.

POULTRY.

The Broiler Business.

One must be more or less of a specialist to raise broilers successfully for market, and unless the business is thoroughly understood it is discouraging. I would not advise any one to start in this work without a long course of preparation. That can come only through general experience with poultry, and then by attempting to raise a few broilers each year for market, increasing the output year by year, and making additional facilities and improvements as the returns warrant it. To hatch out a chick and make it grow to the broiler size just when the market demands it must all be accomplished through artificial methods. It is going contrary to all of nature's rules, from the time you put the egg in the incubator until you kill and pinch the bird for market. Consequently we must understand not the laws of nature, but the rules that all have learned through long years of experience.

In every lot of young broilers some will grow much faster than others, and it will be necessary to make an early classification of the strong and weak. Otherwise the strong will crowd down the weak ones, take most of the food, the best of everything, and actually keep them from growing properly through fear and intimidation. Keep the weak ones together, and the strong chicks by themselves, and it may be even a third division will improve matters. The pugnacious chicks might well be kept in a separate pen, where they can fight it out among themselves, and not vent their anger upon the more peaceful ones. The most important disease the young broilers and spring chickens suffer from is bowel trouble, and the food must be given to them very carefully. This is often due to the fact that the young chicks have not taken enough grit in their food to grind it properly. Chick size grit should be given to them regularly, and if they do not take it mix it with their mash. Grit must be eaten by the birds if their health is to be maintained, and as they grow older large size grit must be fed to them. Bowel troubles will rarely develop where sufficient grit in one form or another is given to the birds. Growing chicks should never be crowded, and when the days are warm enough they should be given all the outdoor exercise possible. When they have to work for their food they have good digestion, and when they have that few troubles or diseases will bother them.

ANNIE C. WEBSTER.

Pennsylvania.

Poultry and Game.

The poultry market is dull, owing more to light demand than an over supply, but prices are held nearly steady. Prime roasting chickens still bring 17 to 18 cents a pound, and Jerseys are 16 to 17 cents, with fair to good at 10 to 13 cents. Good broilers are scarce, and 85 to 90 cents a pair is being paid. Fowl are dull, and it is hard to get over 11 cents for choice, and perhaps not over 10½ cents if the glut is not relieved. Winter-hatched ducks in fair demand at 30 to 35 cents a pound, and last year's ducks at 10 to 12 cents. Geese dull at 11 to 12 cents. A few fresh turkeys, but most of them will not bring over 9 to 10 cents. Western dry packed turkeys a few choice hens bring 11 to 12 cents. Most buyers prefer frozen stock and of such some choice small turkeys bring 12½ cents and mixed weights 11 to 12 cents. Choice frozen chickens are 12½ to 13 cents, common to good 10 to 11 cents, fowls 10 to 10½ cents, ducks 10 to 12 cents and geese 10 cents. Live poultry in small supply, fowls selling at 11 to 11½ cents, mixed lots 10½ to 11 cents and roosters 5½ to 6 cents.

Pigeons at $1 to $1.50 a dozen, and squabs $2 to $3. Game dull, and working off slowly. Grouse are $1 to $1.50 a pair, and quail $1.50 to $2 a dozen. Canvasback ducks steady at $3 a pair for choice, and lighter weights $1 to $2.50, Mallards $1 and red heads from 75 cents to $2. Black duck out of season. Teal and small ducks 25 to 40 cents a pair.

HORTICULTURAL.

Vegetables Under Glass.

Fungous diseases common to cucumbers, lettuce and tomatoes under glass were considered by Prof. G. E. Stone of the Hatch experimental station at Amherst, before the Massachusetts Horticultural Society at a recent meeting. He said in part:

In considering this subject it should be stated that any single one of the plants would furnish data enough to occupy one's attention for more than an hour. We shall, however, briefly consider the fungous diseases common to these three crops, as well as touch upon some of the methods of cultivation. Diseases of plants have been known from the dawn of civilization. Rusts, smuts, mildews and rots are old terms, which are mentioned in the most ancient writings. Before, however, we commence to consider the fungous diseases of these crops let us fully understand what we mean by disease, and also some of the conditions which are favorable in the plant organization for the intrusion of fungi. We can define a disease as a failure or perversion of the normal physiological activities of the living organism. Diseases may arise from intrusion of parasites, or they may be due to purely physiological disorders. In both instances conditions result which may be manifested in stunted growth, abnormally enlarged part or disintegration of the tissues which frequently result in the death of the organism. There is a disposition of plants as well as animals to disease which may be an internal or inherited one, as we see in some variegated plants and in run-out stock or an external or accidental disposition, dependent upon environmental factors. It is also known that there are other conditions upon which disease depends; for example, a plant at the lower limit of vital activity is more susceptible, and also young tissues are more susceptible than old tissues to disease, as illustrated by damping off of young seedlings. And also when a plant is in a state of inactivity it is more susceptible. The diseases which we are to consider at the present time are those to which greenhouse plants are subject, and which to a certain extent differ from those out of doors.

In growing greenhouse crops the gardener has the environments under his own control, and the more thoroughly he understands the proper conditions of the plants the less likely they are to be diseased. While the control of the plant's environment is desirable in many ways to the gardener, it also has its drawbacks, for if the gardener does not understand the plant's requirements diseases are sure to soon quickly show themselves much more disastrously than when out of doors, when left to nature's care. The principal factor which the gardener has to deal with are heat, light, moisture and soil, including its chemical composition and physical properties, the latter being of more importance than its chemical composition.

We shall take up first the subject of cucumbers. These are extensively grown in our State and require a temperature from 65° to 85° F. They are not especially sensitive to mechanical conditions of the soil, neither do they respond very quickly to fertilizer. A good soil for cucumbers is one made of decomposed sod and horse manure. This makes a light, pliable soil. They require all the light possible under glass, especially between the months of November and March, a matter which is too little understood by those growing cucumbers. Some of the so-called diseases can be traced directly to the lack of light in the house. This is especially true where growers have resorted to the practice of using two layers of glass in their houses. The plants under such conditions become yellow; they cannot assimilate the carbon dioxide from the air properly, as the light is largely excluded by the two layers of glass and the usual two accompanying layers of dirt. Frequently under these conditions they behave like plants grown in the dark, their stems become weak and slender and they are rendered more susceptible to disease. When raised under these conditions and exposed to the bright sun of spring they wilt badly and the foliage becomes quite useless to the plant, as a result of which many cucumbers are stunted, and owing to the lack of assimilation due to the paucity of green foliage the cucumbers grow stubby and bring a low price.

There are 10 fungous diseases peculiar to the cucumber. Some of these are of rare occurrence, and only show themselves when something is radically wrong with the crop. There are others, however, that are more or less universal and require consideration. Among there may be mentioned the damping fungus which attacks seedlings, the powdery mildew, stem rot, the anthracnose and the wilt. The wilt is peculiar to out-door cucumbers. This is caused by bacteria which plug up the vessels, thus interfering with the water supply. This has not been seen on indoor cucumbers in Massachusetts. The powdery mildew is more or less common, and can be controlled by attention to moisture conditions and light. It is seldom found on vigorous plants of good texture. The damping fungus is troublesome to young cucumbers, and can be prevented by sterilizing the soil. The anthracnose would seem to be caused by too great a difference between the day and night temperature. On this account it is far more common in the spring in greenhouses when the fires go out.

Besides fungous diseases there are two or three troublesome pests which belong to the animal kingdom, known as aphis and thrip, both of which are controlled by tobacco, and nematodes, which give rise to galls on the roots, and can be controlled by the application of heat or by thorough desiccation of the soil.

Tomatoes require similar temperature and moisture conditions to those of the cucumber. There are some 12 fungous diseases recorded for tomatoes, but the fruit rot and mildew are the most troublesome diseases of these parts. These can be controlled by spraying. They also, like the cucumbers, are subject to nematodes, and the same method of treatment applies to both.

The lettuce is the most difficult of the three plants enumerated to grow under glass, and no finer examples of skill in lettuce growing can be seen anywhere in the world than in the neighborhood of Boston. The coast soil in the first place is especially adapted to lettuce growing, whereas that in the interior of Massachusetts is not so well adapted on account of containing a larger per cent. of clay and a less amount of coarse material. There are several fungous diseases listed for the lettuce. Among the more important ones are the mildew, top burn, the drop and the rhizortonia. At the Hatch Experiment Station, Amherst, especial attention has been paid to the diseases of lettuce, and, as in most instances where we have generally supposed there is a certain abnormal condition brought about by a single disease, we have found a number of distinct ones which frequently require distinct methods of treatment. The most troublesome disease, however, is what is known as the drop. This is caused by a fungus which ramifies through the soil but does not propagate by spores. This disease causes enormous losses in our State. Some houses almost entirely succumb to it, whereas many other growers have from 25 to 50 per cent. of the disease in their houses. It has been found that the best method of treating this disease is by the use of heat or sterilization of the soil. Numerous experiments with gas and chemicals have shown but the slightest efficiency in controlling this. Various methods are being tried to control this disease, one of which consists in covering the soil with a layer of about one inch of sterilized soil. This succeeds in greatly reducing the loss. Two inches of sterilized soil is far superior to one, but the only absolute method known yet is to completely sterilize the soil in the house, or at least to heat it up to about 200° F. This is done by placing two-inch tile in the soil about one foot deep, and passing steam through them. With a large high-pressure boiler enormous quantities of soil can be heated up in a very short time to the requisite temperature. Plants grown in such soil are greatly accelerated on account of the effect of the heat on the humus compounds. When this disease, moreover, is once eradicated, care being taken to prevent the inoculation from refuse heaps, there appears to be no reason why the disease cannot be kept out of the house indefinitely. The same method of treatment would appear to apply to some of the other fungous diseases which do not propagate by spores.

FIG. 1. (a) side, and (b) end view of egg of fall canker worm; (c), (d) markings of larva enlarged; (e) mass of eggs natural size; (f) full grown larva; (g) pupa; (h) structural detail.

FIG. 2. (a) male moth of fall canker worm, (b) female moth; (c), (d) structural details.

FIG. 3. (a) spring canker worm full grown larva; (b) egg; (c), (d), markings of larva enlarged.

FIG. 4. (a) male moth of spring canker worm; (b) female moth; (c), (d), (e) structural details.

FALL AND SPRING CANKER WORMS.

Parsnips for Spring Use.

The parsnip is so hardy a root that, like salsify or vegetable oyster, it may be left in the soil where it grew all winter without being materially injured. Usually there is enough snow on the ground to afford all the protection needed to what grows below the surface. What runs into the soil may be exposed to freezing temperature without injury, for if the frost enters the parsnip it is extracted by the sol around it. We have known parsnips that grew above the surface to be injured by freezing and thawing several times during the winter, when there was not enough snow to protect them. There is another point to be guarded against. The parsnip begins to grow a seed sprout so early in the spring that the sprout often starts before the ground is fit to dig. When a green sprout has once started the parsnip becomes worthless for eating. It will be hard like wood, and be also to some extent poisonous. So even if the soil be in poor condition for working, it is best to get out all the parsnips that are wanted for spring use and keep them in a cold, damp place, where they will neither sprout nor dry up. It should be in the dark also, as light is injurious, stimulating the green growth which makes the root poisonous. If parsnips are allowed to seed without transplanting they will not produce a seed crop that is worth anything to plant. It will only produce plants that have the parsnip look and flavor, but which must be killed as weeds.

Canker Worms.

These insects (for there are two distinct species of canker worms) are generally distributed throughout the northeastern United States. Here they are periodical pests of the apple and elm, although their feeding is not restricted to these trees. Both are native insects and both have been pests of the apple orchard for over a century. According to the time of the appearance of the moths, the insects are classified as "fall" and "spring" canker worms. Early students of the insect injuries did not distinguish between the species; thus we note that damage by the canker worm was prevalent in 1740 in Massachusetts. The history of canker worms in this State, as recorded by various authors for about a century, shows that they have been periodically abundant, continuing their ravages for a few years, then subsiding to appear at a later interval.

Fig. 1 and Fig. 2 represent the fall canker worm. This is the more common species in Massachusetts. The eggs are laid in patches on the trunks and branches of trees by the gray, wingless female moth, late in the fall after frosts have occurred. The moths may be found ascending the trees during the winter in thawing weather.

The young canker worms hatch with the unfolding of the buds. These tiny insects are typical inch worms or "loopers." When disturbed, they spin down from the trees on silken threads. As a result of their diligent feeding the foliage of the infested tree turns brown, as if scorched by fire, and soon falls, and with it comes the immature fruit. By early summer the insects complete their growth, bury themselves in the ground and transform into pupæ, from which, in the fall, the winged male and the wingless female emerge.

The spring canker worm is represented in this issue by Fig. 3 and Fig. 4. The insect has habits similar to those of the fall canker worm, but emerges in the spring instead of in the fall, and lays its eggs in smaller masses and usually in more sheltered places on the tree.

The best distinctions between the species are afforded by the eggs and larvæ. The egg of the fall canker worm is cut off squarely on the top and bottom like the frustrum of a cone; that of the spring species is ovoid. The larvæ of the spring canker worm have but two pairs of prolegs at the posterior end; those of the fall species have three pairs, the anterior pair being very short.

Among orchard trees, the apple is most severely attacked by the canker worm, while, of shade trees, the American elm suffers most severely through ravages.

Few, if any, insects are so generally attacked by birds. Our winter birds, notably the chickadee, nuthatch and woodpecker, eat large numbers of the eggs. The writer once found 1629 eggs of the fall species in the gizzard of a white-breasted nuthatch, while the researches of E. H. Forbush on "The Diet of the Chickadee" show that this bird destroys large numbers of the female moths as well as eggs. Nearly all the insectivorous summer birds feed on the larvæ.

Except in the case of fall trees the cheapest way to fight a canker worm is by spraying with some arsenical compound. For this purpose use arsenite of lead, three or four pounds to 150 gallons of water, or Paris green, one pound to 150 gallons of water. Metal tree protectors are sometimes successful, but are usually very expensive and require constant attention. A simple and very effective protector is made by banding the trees with cotton waste covered with a strip of tarred paper tightly tacked to the tree. The paper is coated with tar, or printers' ink, which intercepts the wingless females. These bands should be put on early in the fall and should be kept in working order until after the buds open. Good results may be obtained from the use of raupenleim bands. This material is extensively used in Germany to prevent the ascent of obnoxious insects. It should be applied to the bark in a band one-half inch thick at the base, which is brought to a sharp edge and beveled upward to the bark. Raupenleim should never be used on young or thin-barked trees, and in all cases, the band should be removed after the insects have ceased crawling.—Leaflet by A. H. Kirkland, Massachusetts State Board of Agriculture.

NOTES AND QUERIES.

COST OF A TRIP TO SOUTH AFRICA.—"W. H. G.": According to a Leslie's Weekly correspondent, in spite of the large American interests in the Transvaal and other parts of South Africa, no direct lines of passenger communication between the United States and that country have ever been established. All passenger traffic for the scene of the present war between the Boer and the Briton must be by way of Europe. From there one may have the choice of several lines. The steamships of the German East African line touch at Amsterdam twice a month on their way to Delagoa Bay and Durban. Steamers of the Union and Castle lines sail each Saturday from Southampton, England, for South African ports, but first go to Holland to pick up passengers and freight. The British and Colonial steamships sail every fortnight direct from London to Cape Town. They are of light draught especially designed to cross the bar at East London and Natal, but carry only first-class passengers. Rates of passage from London to Cape Town range from $66.43, third class, up to $199.28, first class. The distance from London is 5951 miles, and the average time of the voyage by royal mail steamers is seventeen days, and by other lines about twenty-one days. From New York one must add, of course, to these figures from six to nine days of time, and from $50 to $100 for fare. In brief, a traveler from New York to Cape Town via England might reasonably hope to make the voyage in something less than thirty days, and possibly in twenty-five, at an expense for steamer fare of from $136.43 to about $300, according to the accommodations desired. Most of the English lines sell through tickets to Johannesburg via Cape Town, the first-class fare being $225.13, and the additional time from Cape Town by rail about two days. It is hardly necessary to add that during the reigning unpleasantness there is no railway communication between Cape Town and Johannesburg, nor is there likely to be until the way is forced open by the British army with bayonet and cannon.

CHICAGO UNIVERSITY'S WEALTH.—"Student": Sunday, April 1, the University of Chicago woke up over $4,000,000 richer than she was on the morning before. The time limit imposed by Mr. Rockefeller for his $2,000,000 gift expired on that morning. On Saturday morning the university was short $163,000 of the $2,000,000 which it was necessary to raise to secure the prize. Within two hours' hustling President Harper had not only raised the required sum but considerably more, so as to clinch the bargain. Mr. Rockefeller was notified by the trustees that more than $2,000,000 was in hand and he promptly replied that his $2,000,000 was assured. By these latest contributions the total of donations to the university is swelled to the immense sum of $11,355,874, over two-thirds of which is to be credited to Mr. Rockefeller. As the result of these subscriptions the university will be enriched with several new structures, including among others an assembly hall, clubhouse, commons building, cafe, dormitories and extensions of some of the present buildings, and there will still remain a large sum to be applied to other purposes.

THE QUEEN WORKS HARD.—"R. W. C.": The more advanced the Queen of England becomes in years the more her work increases. The extension of the empire, the increased activity of modern life and the developments of the times have quadrupled the work the queen has to deal with at eighty. Therefore she has to work harder than at any previous period of her reign. It is estimated that she has to sign fifty thousand documents yearly, an average of 137 a day, including Sundays. Masses of state papers go to her now, while in Ireland. She never really has two days holiday together.

The old hiring fairs are still held in some rural districts of England. There is a story of an old Gloucestershire farmer, who, seeing a likely lad at such a place, opened negotiations with a view to engaging him.

"Hast got a character from thy last place?" the farmer asked.

"No," replied the boy; "but my old gaffer be about somewhere, and I can get he to write one.

"Very well," was the reply. "Thee get it and meet I here again at four o'clock."

The farmer and the boy met at the appointed hour.

"Hast got thy character?" was the query.

The answer was short and sharp: "No, but I ha' got thine, and I bean't a coming."—Youth's Companion.

——The shipments of leather from the port of Boston for the last week amounted in value to $299,745; previous week, $309,685; similar week last year, $133,057. The total value of exports of leather from this port since Jan. 1 is $3,044,736, against $2,458,575.

——A vessel load of 5835 tons of mowers and binders lately left Philadelphia for Novoairsisk, on the Black Sea. Last year Russia bought about $1,000,000 worth of American farming implements and machinery, and it is expected that this year's trade will amount to $1,500,000. Nearly all goes to southern Russia.

——The demand for eggs has not been as heavy this week, but prices are well kept up. At the prices in the West, choice eggs from there cannot be put down here less than 13 cents, but stock in hand is selling at 12¼ to 12¾ cents for selected and fancy, while Eastern choice fresh can be bought at 13 cents, and fair to good at 12 cents. Some nearby and Cape lots of fancy brown bring 15 cents. Receipts last week were 40,405 cases, against 14,341 cases same week last year. There are 15,326 cases in cold storage now. Last year at this time there were 10,419 cases.

——Rail-bound shipments, [dead freight], from Chicago, by all rail routes last week, were 198,883 tons. Corresponding week last year 90,797 tons.

——Advices from southwest Russia report half a crop of wheat.

——President J. J. Hill of the Great Northern is to have built at Groton, Ct., five steamers, constructed expressly for the oriental freight trade, 750 feet long and with a capacity of 4000 tons greater than that of the Oceanic, the biggest ship on the Atlantic. Two of the ships will be launched in 1902. President Hill means to develop a great Pacific commerce, for which he says there exists magnificent opportunities. As yet our Pacific commerce is less than one-twelfth of that on the Atlantic.

——The largest shipment of hay ever made from this country, and perhaps from any country, was shipped from New York a little more than a week ago. It contained 32,000 bales of compressed hay intended for Cape Town. This hay was mostly grown in Canada but was baled in New York.

——Last month was the greatest in the history of the United States for export business, with the single exception of December, 1898, according to the report of the Bureau of Statistics. The figures indicate that the total exports of the fiscal year 1900, which ends in June, will be larger than ever known before in our history. The probable total is estimated at $1,300,000,000, of which our manufacturers will furnish $400,000,000.

——The total shipments of boots and shoes from Boston this week have been 80,750 cases, against 89,034 cases last week; for the corresponding week last year, 87,563. The total shipments thus far in 1900 have been 1,390,790 cases, against 1,207,393 cases in 1899.

——Trafton makes the exports from the Atlantic coast last week to include 253,000 barrels of flour, 1,219,000 bushels of wheat, 3,771,000 bushels of corn, 4900 barrels of pork, 12,285,000 pounds of lard and 25,010 boxes of meat.

——The visible supply of grain in the United States and Canada on April 14 included 55,273,000 bushels of wheat, 24,788,000 bushels of corn, 7,543,000 bushels of oats, 1,311,000 bushels of rye and 871,000 bushels of barley. Compared with the week previous this shows a decrease of 139,000 bushels of wheat and an increase of 1,769,000 bushels of corn, 69,000 bushels of oats, 35,000 bushels of rye and 159,000 bushels of barley. One year ago the supply was 30,502,000 bushels of wheat, 29,798,000 bushels of corn, 11,136,000 bushels of oats, 1,385,000 bushels of rye and 1,936,000 bushels of barley.

——The world's exports of grain last week included, five principal countries, wheat, 6,873,000 bushels of wheat; four principal countries, 364,900 bushels of corn. Of this the United States supplied 2,896,000 bushels of wheat and 2,799,000 bushels of corn.

——Cheese drops a little in price this week, as new makes will soon come in.

——Maple sugar receipts are light as yet, and choice sells in small lots at 12 to 13 cents. A little fancy syrup sells for $1 a gallon, but most of it is at 90 cents or lower.

——Bradstreet's made a decrease in wheat east of the Rockies of 1,373,000 bushels; 1,100,000 afloat for and in Europe; total 2,373,000; corn increased 681,000, oats 119,000. Among the more important decreases reported to Bradstreet's, not given in the official visible supply statement, are those of 700,000 bushels at Northwestern interior elevators, 240,000 bushels at Manitoba storage points, 189,000 bushels at Depot Harbor, 81,000 bushels at Sioux Falls, 74,800 bushels at Portland, Me., and 71,000 bushels at East Dubuque. The principal increases are those of 148,000 bushels at Port Huron, 132,000 bushels at Milwaukee private elevators and 53,000 bushels at Chicago private elevators. The aggregate stock of wheat held at Portland, Ore., and Tacoma and Seattle, Wash., decreased 7000 bushels last week.

——Shipments of live stock and dressed beef last week included 1530 cattle, 1100 sheep, 9853 quarters of beef from Boston, 2579 cattle, 20 sheep, 17,466 quarters of beef from New York; 1170 cattle, 1104 sheep from Baltimore; 567 cattle, 1134 quarters of beef from Philadelphia and 239 cattle from Portland; a total of 6075 cattle, 2234 sheep, 28,431 quarters of beef from all ports. Of these 2979 cattle, 1601 sheep, 19,263 quarters of beef to Liverpool; 2238 cattle, 6650 quarters of beef to London; 450 cattle, 603 sheep to Glasgow; 150 cattle to Bristol; 250 cattle to Hull; 3500 quarters of beef to Southampton, and eight cattle, 20 sheep to Bermuda and West Indies.

——Beef is dull, with the market firm, especially on the medium grades: Fancy sides 8½ cents, choice 8¼ cents, good 7 to 7½ cents, light 6 to 6¾ cents, cows 5¾ to 6 cents, fancy hinds 11 cents, extra 10¼ to 10¾ cents, good 9¾ cents, light 7¾ to 9 cents, fancy fores 6 cents, heavy 5¼ cents, good 5½ cents, light 4¾ to 5¼ cents, backs 5¾ to 7¼ cents, rattles 4 to 4¾ cents, chucks 4¾ to 6½ cents, short ribs 8½ to 11 cents, rounds 6 to 8½ cents, rumps 8¾ to 12½ cents, rumps and loins 9½ to 13 cents, loins 10½ to 15 cents.

——The pork situation remains very firm. Big speculative buying is reported in and: Heavy backs $16.25, medium $15.75, lean ends $18.50, lean pork $13.75, fresh ribs 11 cents, corned and fresh shoulders 9½ cents, smoked shoulders 9¾ cents, lard 8¾ cents, in pails 9½ to 9¾ cents, hams 11½ to 13 cents, skinned hams 13¼ cents, sausages 9¼ cents, frankfurt sausages 9¼ cents, boiled hams 18 to 18½ cents, bacon 11¾ to 12½ cents, bologna 8 cents, pressed ham 12 cents, raw leaf lard 9 cents, pure leaf lard 9 cents, in pails 9¾ to 10 cents, pork tongues $26.50, loose salt pork 8½ cents, briskets 9½ cents, sausage meat 8 to 8½ cents, city dressed hogs, 7¾ cents, country 6½ cents.

MASSACHUSETTS PLOUGHMAN
NEW ENGLAND JOURNAL OF AGRICULTURE

BOSTON, MASS., APRIL 28, 1900.

In New York they have been elevating the stage after a new fashion. On Thursday the House of Bishops adjourned from convention and were the guests, at a luncheon served in the grill room of the Players' Club, of Bishop Potter, who is an honorary member of the club.

Mr. Markham would perhaps be doing well to turn now from the lyre to the plow—or the hoe. He wrote a poem for the unveiling in New York on Thursday of the Bartholdi statuary, representing Washington greeting Lafayette, one verse of which ran thus doggerelly:

Be wise, my countrymen, let light increase;
There is a toil more glorious than war—
To mould our country in the days of peace,
And make her worthy of our dying for.

Judge Hazen, the brother of Mrs. Dewey's first husband, comments thus on the situation: "I know Mrs. Dewey very well, and if the people of this country do not desire to place the destiny of the nation in the hands of a woman it will be best to let the admiral remain where he is." Which looks very much as if Dewey, though at the head of the navy, may have a "superior officer" from whom to take orders.

Kipling's "Auld Lang Syne" verse, written for the African correspondents' entertainment in behalf of Tommy's widows and orphans, certainly seems sufficiently full of the "imperialistic" spirit as it swings along:

The shamrock, thistle, leek and rose
With heath and wattle twine,
And maple from Canadian snows,
For the sake of auld lang syne.
For auld lang syne take hands
From London to the line,
Good luck to those that toiled with us
Since the day of auld lang syne.

An International Farmers Conference, to be held in Paris on the week between July 9 and 16, is expected to recommend to farmers to restrict wheat production by limiting the area, and to agree not to sell wheat anywhere for less than a dollar per bushel. European farmers have suffered more from low prices than have those of this country, as their land is dearer, and they must produce much more to make the crop a paying one. We do not have much faith that such an agreement will be kept, even if made. Probably in most localities where wheat does not now pay, less will be grown the coming two years, whether there is or is not an agreement to restrict production. Dollar wheat sounds cheap to men whose wheat must cost from a dollar and a quarter to a dollar and a half per bushel. But there are millions of acres available for wheat sowing where the price of a dollar a bushel for wheat means unlimited prosperity, and no agreement made in Paris can prevent such farmers from growing all the wheat possible while the price remains so high. There is much more chance for wheat to rule higher than it has through its increasing use by people who have only found out during the years it has ruled at low price that it is the best grain for bread.

It is sometimes said of farmers who sell everything that they grow, instead of using it to restore its lost fertility, that they are selling their farm by the bushel or other measure. But this literally occurs in many places where the soil itself is sold to grow flowers and greenhouse plants in, or is grown up in sod which is cut up into turf and planted to create a green lawn more quickly than it could be grown from seed. It is quite common for farmers to grow lawns for this purpose, and as they get 25 cents per square yard of turf, this makes the crop worth more than $300 per acre or more for a single crop than most farm land is worth. A dressing of manure with some mineral fertilizer will restore lost fertility, and another cutting of turf can be grown in three years after the first is taken off. Besides this, black muck from wet places is often sold to grow house plants and vegetables in, being first put in boxes. The value of this earth is often reckoned by its blackness. But this is not a true test. Most of the black muck has come from very wet places, and it needs to dry out and be freed from the humic acid it contains, which is a rank poison to vegetable growth of any kind.

The large vote of 240 in favor of electing senators by direct vote of the people, to only 15 against such an amendment, pretty fairly represents the public feeling on this question. But it may not mean that such an amendment to the Constitution will soon be adopted by the requisite number of States, so that it will not be the 16th amendment. It will have to be adopted by the Senate, many of whose members could never have secured seats in the upper branch of the National Legislature if popular favor alone could determine who should represent the State. It has become increasingly difficult to ratify amendments to the United States Constitution, though it must be conceded that several parts of that instrument have not worked in practice as was expected of them when they were adopted. There are a number of senators both from the East and from the West, who mainly represent vast accumulations of wealth such as were almost unknown when the Constitution was framed, when its President, George Washington, was the only millionaire our country had, and he owned so much of his wealth in land that it was hard work for him to raise money to pay his taxes. He owned at one time much of the land where Pittsburg now is. But he disposed of it long before the city grew up at the junction of the Allegheny and Monongahela rivers, which there uniting become the Ohio, the largest eastern branch of the greatest of all rivers, whether that be called Mississippi or the Missouri.

How old is Senator Chauncey M. Depew? He surely is old enough not to try to pass himself off as a young man. Yet this is what he did a few days ago in the Senate on the question whether Congress should repay to the city of Frederick, Md., for damages sustained by it from a Confederate raid during a civil war. Whittier wrote the well-known poem which commemorated the loyalty of Barbara Frietchie in waving the Union flag to oppose the advance of the Confederates under General Early. Mr. Depew claimed to have been familiar with those lines from boyhood. He was in truth a man of 30 before the event happened. It is hard to tell sometimes whether Mr. Depew is serious or in earnest when he makes a speech or tells a story. This greatly detracts from the dignity which every United States senator should possess, for he represents a considerable part of the sovereignty of the people, and no less than a member of Congress should guard well his reputation as their representative. But an old-time admirer of Mr. Depew has fixed the date of his birth "in the early days of April, 1834," when he resented the visit of ancient gods and goddesses to Peekskill on the Hudson to welcome the coming to earth of one who was destined later to be most noted as an after-dinner speaker. If Mr. Depew were a boy when Whittier's poem was printed, he would hardly be of constitutional age to serve as United States senator when he was elected, for that requires a senator to be thirty years old when he takes his seat.

There is a strong outcry from the two railroads in this State which are making connections with railroads in other States against a proposal by the Legislature of Massachusetts to limit passenger rates to two cents a mile. They claim that such low fares will make the roads unprofitable. But the experience of New York State with the New York Central Railroad shows that the rate of two cents a mile for each passenger has resulted in a greater degree of prosperity than any higher rate would probably have done. It has sent through New York State most of the heavy emigration from Europe, bound for farms in the Western States. The knowledge that a higher rate than two cents a mile is impossible without amending the charter of the road has always been the best advertisement that road could have. At various times the corporation tried, but vainly, to allow the road to charge three cents a mile on parts of its route that ran through a difficult country. But the people always strongly protested. Once the State legislature made a law authorizing three-cent fares on the New York Central, but Governor Fenton vetoed the bill and his veto was sustained. Of late years the corporation has stopped trying to have its charter amended. If the two cent fare were made obligatory in this State it would probably be found after a few years impossible to change the law and increase the cost of traveling. The adoption of electricity as motive power is making the cost of transportation cheaper than could be afforded by steam.

The Jury System.

Trial by jury of his peers is secured by the United States Constitution to all persons accused of crime, and in almost all civil cases except in places where in time of war military jurisdiction supersedes the civil law. This is one of the most important guarantees of liberty and free institutions, and the jury system, imperfect as it may and must be, is the most potent factor in fitting any people to govern themselves. It is one of the duties of good citizenship to fulfil if possible all drafts which social order makes on citizens to serve as jurors. It is not alone to help secure justice between man and man, but in the effort to do this the juror's mind will be broadened by the new experiences of life which the trial room and the jury room afford. He will be enabled to learn far more of human nature and the way men think and live by such association than is possible in any other way. But it is a most irksome duty, especially in the criminal courts, where all kinds of accused persons are placed on trial for their right to liberty, and in some cases to life also. It is not strange that so many try to shun service on the jury. But because it is a duty and because it is a necessary part of the system under which what we call human justice is administered, it is the most sacred and responsible position to which any citizen can be called.

Yet after all is said it must be confessed that justice administered by men must necessarily partake of the imperfections of our human nature. It is hard to judge a case wholly by reason which sifts the evidence on either side without being influenced by either prejudice on one side or sympathy on the other. Yet this is just what is required of every juryman, and what he has most solemnly sworn to do. There is always some evidence on either side, and it is often so flatly contradictory that the juror has to do the closest kind of thinking to decide which to believe. He must do so if he tries conscientiously to do what he has taken a solemn oath to do.

In a criminal jury the verdict that he and 11 others gives involves the protection of society by the due punishment of crime, and it also involves the liberty of a citizen, who until conviction is presumably innocent of crime. It is often hard to decide to which side the verdict should be given when there is conflicting evidence both for and against the accused person if the juror tries to decide according to the evidence. After making due allowance for differences of view that witnesses may honestly make of the same occurrence, there are instances where the contradiction is so positive that one or the other must have sworn falsely. Whatever the verdict in such cases, there must be always an element of doubt as to the absolute justice of such verdicts. Human justice is at best only approximate and extremely imperfect. Only exact justice can be meted out by Omniscience, and that by the deity whom we are taught to revere as Father to the entire human race.

There are on every jury two classes of people, each of whom is entitled to a hearing, in order that even approximate human justice be done. One regards as the chief object of jury trials the certain conviction of the guilty. The other thinks it equally important to acquit the innocent and not do an injustice of punishing them. Popular legal maxims can be and are quoted by each side in favor of its contention. The man who commits a crime has by that fact forfeited his right to liberty, and possibly to life, and is to be disposed of in such way as shall protect society in future. On the other hand, all persons are presumably innocent, even after they have been indicted, for before grand juries only the side of the prosecution is heard, and it is plain prejudgment of a case to assume guilt because the accused has been indicted. This is not the worst; those who have not money or friends to procure counsel take their trial before a jury with no one to plead for them, except as they may do this themselves. In some and we think in most of the States it is made obligatory on the court to assign counsel for those unable to provide it for themselves, but in this State it is not. Justice is expedited here by forcing those who have neither money nor friends to plead before the court, and if they elect to have a trial they must conduct the defence themselves. Most of them plead guilty, receiving a less punishment than if sentenced after trial and conviction. How much injustice may thus be done to those entirely innocent of crime can never be known.

Yet for those who stand trial with no one beside themselves to conduct their defence, there is, perhaps, as difficult an ordeal. Crimes against social order are so common that almost everybody has suffered from them, and has his own personal wrongs to [illegible] his prejudices against every one who is accused of the particular kind of crime that has some time been committed against himself. Yet it is most certain that neither personal sympathy for the accused nor personal feeling against the class of criminals with which his indictment classes him should in any way influence the juror's verdict. He is not trying the whole class of criminals, who may deserve all the reprobation which any juror may express for them. It is the sole duty of the jury to decide from the evidence that the accused did or did not commit the crime for which he has been indicted. If the juror sets aside both sympathy and prejudice, as every juror should, his task will be found much more difficult.

As an offset for those who have no counsel to plead for them, the court announces that the district attorney is not allowed to plead against them. But the district attorney has conducted the examination of witnesses, except as the accused is allowed to cross question them from the prisoners box. But this position prejudices the jury more often than it helps him, and, such is the weakness of human nature, that it requires more argument to remove a prejudice than to convince the reason. It is an old saying and a true one, "What has not been reasoned into a man cannot be reasoned out of him." If it comes from prejudices, the only way to remove them is to arouse counter prejudices that will make the man's mind so evenly balanced that there will be some chance for reason to be heard.

In the States where the court assigns counsel for indicted persons who are unable to otherwise procure it, some of the junior members of the bar are chosen for this service. This is always done for small compensation, and such service is sometimes done without any, through a desire to see that absolute justice is done. This is far better than having no counsel whatever. Whether it was for the sake of economy or to relieve the courts by expediting business that neglects to provide counsel for indicted persons who cannot procure it themselves, it is a bad policy and results in injustice. It may even be that this neglect vitiates the trial, for to try a man with the enginery of prosecution in full force without equal enginery for defence cannot be regarded as likely to secure the approximate human justice is expected to mete out to those accused of crime.

Nearly sixty years ago William H. Seward who had been twice governor of New York State, volunteered for the defence of an ignorant, brutal negro named Freeman, who had murdered an entire family in Cayuga County, N. Y. The negro, Freeman, had no counsel, and after the court had tried in vain to secure some, Mr. Seward volunteered to conduct his defence. He became satisfied that Freeman was insane. He proved that Freeman was in the early stages of senile dementia, and secured Freeman's acquittal on that ground. Freeman was removed to an insane asylum, and soon after his dementia became apparent to every one. Thus New York State was saved from the crime of hanging a crazy murderer, and at the same time William H. Seward aroused a prejudice against himself that hurt his political prospects ever after. Yet it is possibly the one act of his life for which the world in time soon to come will most honor him.

Pruning Trees.

Persons who engage in heated argument on the subject of pruning are usually talking about different subjects. Nothing is more common in horticultural discussions than controversies respecting the proper season in which to prune; yet the proper season depends on whether one has in mind the healing of the wounds, or the production of fruit, or the production of wood. Persons will cut off a limb; if the wound heals well, the season is said to have been right; if it does not heal, the season was wrong. The man experimented; what greater evidence could be asked?

Now the fact is that the healing of a wound depends more on the way in which the cut is made and its position on the tree than on the season of the year. Long stub heal slowly or not at all, no matter what the season; wounds made close to the main branch or trunk (not beyond the "bulge") heal quickly. Wounds on vigorous limbs heal more quickly than those on side or weak limbs. Other things being equal, wounds on fruit trees heal best if made in early spring.

Pruning alone cannot be depended on to make a tree fruitful. It is only one of the means of making it bear; other means are good soil, thorough tillage, proper varieties, spraying for insects and fungi. But when the tree is once in a fruitful condition, pruning should be such that the bearing habit will not be upset. Very heavy pruning of the top always tends to make wood, and usually at the expense of fruit. The habit of allowing trees to go unpruned two or three years, and then pruning heavily, keeps them in constant state of wood bearing. This is one of the common reasons why orchards do not bear. Get the orchard into bearing condition; then keep it so by pruning a little each year.

Pruning is a means of thinning the fruit. The best fruit is borne on strong, healthy limbs. Remove the weak wood on the inside and underside of the top. A peach pruner instinctively thins out the weak interior growth. He may not know why, but he is lessening the struggle for existence and is giving the fittest the chance. As a rule, give the best limbs the best chance. One rarely succeeds in trying to force the poorest limbs to be the best.—L. H. Bailey, in Work's Magazine.

The Place for the Jersey.

As a good deal of modern dairying is becoming specialised, it may be said that we will soon have special breeds for certain lines of dairying. In a sense, the Jersey breed represents just such a specialty, and she can do her best only when in her proper place. It is a mistake to think that the Jersey is the fancy dairyman's cow and for the wealthy farmer who goes into business largely for the pleasure of it. Likewise it is far from the truth to say that the Jersey is suited to any dairy. The animal is a practical and useful one on every dairy where good food, good care and scientific treatment are observed. This presupposes an intelligent knowledge of the needs of this particular breed. The animal is not a hardy or rough one, and it will not stand neglect and abuse. Take a fine record-breaking Jersey milker and turn her out to find a living on rough pasturage, and she will grow thin and cadaverous, and gradually decrease her yield of rich milk. She is not adapted to such a life. Neither will she stand exposure to a rough climate in any kind of weather. She needs more protection and care. We have cows that will endure any kind of rough usage, food and weather, and still seem to thrive. They are suited to the prairie life, to farms where little attention is paid to modern, careful methods of dairying. But if a man has only enough stock to occupy his time so that he can give all the attention needed to each animal the Jersey will probably give him better returns than any other breed.

We must understand that the Jersey animals have been bred to the point where all of their hardy and rough qualities have disappeared, and in their high state of development they can give their best only through good care and feed. The man who buys a Jersey and expects to turn it in the field with the rest of a herd which is allowed to forage for themselves will find in the end that he has not improved matters much. It is possible that the Jersey will yield less milk and cream under such conditions than many of the other animals. We must take the Jersey and put her and keep her in the right place. She must have food adapted to her high-strung, carefully bred nature; she must receive protection from rough or violent weather, and she must be treated with some consideration as to her nerves and physical strength. Surround the Jersey with the right circumstances and environments, and she will prove a paying investment, but neglect her needs and she will prove a loss.

E. P. SMITH.

Ohio.

Brains of Children.

The brains of children are at present the subject of anxious study by the authorities of the District of Columbia, who are trying in this way to reach satisfactory conclusions as to the age at which young folks ought to begin to go to school. It is beginning to be thought that schooling may perhaps be started too early for the health and welfare of the little ones, and this idea seems plausible when it is considered that infants of six years are compelled to seek book learning at the public cost in the District of Columbia and in Wyoming, while mere prattlers of four are allowed to take advantage of educational opportunities in Connecticut, Wisconsin and Oregon, if their parents so desire. In thirteen other States of the Union the minimum age of voluntary attendance is five years.

Light is thrown upon this interesting subject by a study of the growth and development of the mind organ in children. In this line the most important work has been done by Dr. W. W. Johnston, a distinguished physician of Washington, who calls attention to the fact that the human brain attains practically its full weight when the individual is only about eight years of age. At birth the brain weighs approximately a pound, but its development is so rapid that at the end of the first year it would tip the scales at 2½ pounds. At four years it has reached nearly three pounds, but from that time on its growth is comparatively slow. Attaining to what is to all intents and purposes its full size at eight years it does not alter appreciably after 12 years, and after 24 years it begins to diminish slowly but steady in avoirdupois.

These facts obviously have a very important bearing upon questions of school training. So far as brain development is concerned the first eight years are by far the most important of a child's life, the main growth of the organ taking place during that period. It is evident that the stature attained eventually by the mind depends largely upon the perfection of brain growth during this epoch. Dr. Johnston urges that education ought not to begin during this period of brain growth, and that children that are sent to school before they are eight years of age are threatened with serious injury. Also he contends that in view of the facts above stated regarding brain development, instruction during the first years should not be too exacting or too stimulating. Precocity ought to be checked furthermore, and not fostered.

The male brain at birth is heavier than the female brain. Another interesting fact is that a child's brain contains more water and much less nerve tissue than an adult's. At birth the brain of an infant contains 89 per cent. of water, whereas that of an adult has a trifle less than 71 per cent. of water. In a word, the child's brain holds nearly 20 per cent. more water than the brain of the adult. The brain cells develop with the growth of the individual, the average of them multiplying in size by about 450 times, while some of them increase as much as 10,000 times. The growth of the brain is due, however, not only to the increase of the cells in size, but also to the multiplication of the brain cells. The bigger the human being the more brain cells he has, other things being equal, and this point has been studied out quite extensively with frogs, the largest frogs being found to have the greatest number of cells in their brains.

The first eight years are the most important of a child's life, for the reason mentioned, and it is urged that school education ought not to begin until this period is about over. But it still remains to be determined how many hours daily should be given by the child to study. It has not been ascertained definitely whether the child is helped or hindered by competition, and a good many other questions in this same line remain unanswered. One thing deemed certain is that school children, generally speaking, in this country and elsewhere, are overworked. There are 17,000,000 pupils in the public schools of the United States, and it goes without saying that some of them are much feebler mentally and physically than others. Nevertheless, the pace is set by the capacity of the stronger and smarter ones, and all are forced along together,—always to the detriment of the weaker and less clever.

Not until very recently has serious attention been called to the evils which may be said to spring from unscientific schooling. Recently, however, experts have been making a study of the subject, and one matter to which they point is the extensive propagation of what may be termed school diseases,—that is to say, ailments caused by improperly directed efforts to train the minds of youth. It is asserted that large numbers of pupils in the schools die annually from the effects of mental over fatigue in one shape or another; that much greater numbers are more or less permanently invalided by the same cause, and that a very considerable fraction of the whole number of pupils entered in the public schools drop out through inability to keep up. In short, the conclusion drawn is that school life favors decidedly the development of ill health among young folks.

This, if true, is a pretty how-d'ye do. Dr. Johnston says that nervous troubles and affections of sight are the most common of school diseases. Insomnia, St. Vitus's dance and palpitation of the heart are frequent. Such afflictions increase steadily from class to class as the pupils go up higher and the studies increase in difficulty; they grow with the number of hours of study per day. A special investigation of the subject in the schools of Sweden showed that near sight increased from six per cent. in the lowest classes to 37 per cent. in the highest. The same progressive impairment of vision in school children has been noted in Russia, England, Germany (where it reaches 50 per cent. in the higher schools) and in our own country.

Sleeplessness, sleep talking and sleep walking seem to be more frequent in school children than in any other class of people. A study of this subject in the London elementary schools showed that 38 per cent. of the pupils suffered from sleeplessness, the boys showing a higher percentage than the girls. In one school of 381 boys there were 129 sleep talkers and 28 sleep walkers. In a school of 432 girls there were 17 somnambulists, while in another of 482 girls there were 20 sleep walkers. The teachers said that parents frequently complained to them that their children talked of lessons in their sleep, and that arithmetic seemed to be the chief cause of disturbance. It may be mentioned incidentally that in Prussia, during the five years from 1883 to 1888, no fewer than 289 pupils in the schools committed suicide. Out of this number 121 were attributed to fear of examinations, failure of promotion, fear of punishment, and other reasons having to do with school management and discipline. Happily this tendency to child suicide does not seem to have developed itself in our own country.

In each generation there is a small percentage of children who are in advance of their fellows, showing extraordinary brightness at an early age. For some time past it has been questioned whether such symptoms are signs of normal or abnormal conditions, and whether the precocious infant is above or below the average in prospect of eventual growth and development. Dr. Johnston says that such children as a rule are of inferior physical development. They are apt to be troubled with nervous disorders, are thin blooded, have small appetites, are easily tired, and, if they are attacked by illness, are much more apt to die than ordinary children. In a child quick intellect, vivacity, unusual power of memorizing and vivid imagination are very attractive qualities and a source of pride to parents, but in reality they are signs of an abnormal state of the nerve centres. They are likely to mean that the nervous system is being developed too fast and that it will be exhausted at an early age. In nature precocity is a sign of inferiority. If proof of this is desired, one may point to the Negro infant, which in its early years is far superior to the white child of like age in mental development. But after that time the white child passes the Negro very rapidly, and henceforth there is no comparison between them. Travelers in equatorial Africa have described the native piccaninnies as "absurdly precocious." The more perfect the organism the slower its development is one of the rules of animal creation.

As the brain of the child grows, the case that holds it, which is called the skull, must develop proportionately. Represent the length of the new-born infant's skull by 10, and by the time the 221 month is reached it will be 15, and at the age of 14 years it will be 20. After middle life the skull steadily diminishes in thickness, so that in a very old man it has become quite thin and brittle.

The most remarkable bodily growth of a child is during its first six years; during that period it grows twice as much as in the second six years. In the sixth and seventh years it grows very fast, but from that time on its development decreases until the age of 10 in girls and 12 in boys, or thereabouts. The period ending with the ninth year has been called the "physiological period," because at the end of that twelvemonth a resting period of bodily development sets in. Then, just before puberty arrives, comes a great acceleration of growth, the slackest time in this respect having immediately preceded the jump.—Rene Bache, in Boston Transcript.

Bees and Honey.

Farmer's Bulletin No. 59 says that the bees in Washington city gather more honey in the spring and summer months than do those in the country towns near there. This is due in part to the fact that the basswood or American linden tree has been extensively planted as a shade tree along the streets and avenues of that city, and in part to the prevalence of the sweet clover, Melilotus alba, being there a weed very prevalent about the vacant lots and neglected corners. It also tells of a prosperous apiary on the roof of a business house in the heart of New York city and another apiary of 30 to 40 colonies on the roof of a store in the business portion of Cincinnati, which usually gathers 30 to 40 pounds of honey per colony in a season. Those who are so fortunate as to live where the basswood and sweet clover abound will do well to take a note of these facts, and provide themselves with bees. And those who have bees should see if they have not vacant places and neglected lots where they can sow the sweet clover. Or a place in some field where they can put on a dressing of wood ashes and grow the white clover. We have even seen the white clover come in very thick where a dressing of plaster was sowed on. It may not pay to sow crops on purpose for the bees. Some beekeepers say it does not, but if we can get white lover instead of gray moss in our pasture, and sweet clover instead of ragweed in our fence corners the bees will profit by it, and so will the owner of the bees.

In getting a colony of bees ready for the honey harvest, one should know what plants will furnish pollen and nectar in abundance, and when they usually are ready for the bees to work upon. It usually takes worker bees about 37 days from the egg until they are ready to fly out to gather honey, though they will go out at an earlier age sometimes if the colony is weak and the stores low. This is like the sending of children out to earn their living when very young; it may seem necessary under some circumstances, but it is neither well for the children nor profitable to the parents in the end, if they can sustain life in any other way.

Then the time to begin to feed the bees to stimulate brood raising is best placed at 37 days before the blooming of the flowers [illegible] a little more, that there may be plenty of bees to go at work when the honey is ready for them. If the season is delayed beyond the expected time, keep up the feeding, and if the combs get well filled with brood and stores, put on a super with frames of empty comb, or full sheets of foundation, and let the queen go up there to start more brood. If one can get a double hive in this way well filled with brood, he may expect not only a strong swarm from it, but more than one or two crates of sections or frames above it well filled with honey. It is in this way and by feeding when the honey flow slackens, and by good care at all times, that some are able to get 100 pounds of honey or more from each colony.

In this way the eight-frame hive can be made practically a 16-frame hive, with bees enough in it, and it will not send out but one swarm or should not be allowed to do so. If more increase is desired allow them to send out a second swarm, which they are likely to do if the colony is strong and queen cells are not destroyed, then hive the new swarm in the upper box with the brood and comb that may be there, and have the lower hive on the old stand with supers to build comb in.

How many have ever taken particular notice of various sounds made by a colony of bees? All experienced bee keepers can tell well the condition of a colony by listening to them. The sharp, shrill sound of a hive disturbed and angry is no more like the sound heard when they are working busily in a good honey flow than is the angry growl of a cat when she thinks some one wants to take her food away like her contented purr as she sits by the fire after a satisfactory meal. Some even claim to know the sound of the bees when they are queenless, or to detect a different note when they are about to swarm. Undoubtedly one who is quick of hearing and has an ear to detect different tones can acquire the faculty of judging them very closely in this way by a little practice. When the angry sound is heard, as sharp as the voice of a scolding woman, it is better not to disturb them unless it is feared that it is caused by the presence of robber bees, or some other intruder in the hive. Then use the smoker freely, before opening the hive wide open.

MARKETS.

BOSTON LIVE STOCK MARKET.

Week ending April 25, 1900.

Amount of Stock at Market.

	Cattle.	Sheep.	Shotes and Suckers	Fat Hogs	Veals
This week.	2943	4083	138	26 724	2780
Last week.	2108	2924	90	20,064	2488

Values on Northern Cattle, etc.

Beef.—Per hundred pounds on total weight of hide, tallow and meat, extra, $6@6.75; first quality, $5 50@5 75; second quality, $5 00@5 25; third quality, $4 00@4 50; a few choice single pairs, $7.00@7.25; some of the poorest, bulls, etc., $3 00@3.75.

Cows and Young Calves.—Fair quality, $20@38; extra, $40@48; fancy milch cows, $50@65; farrow and dry, $12@25.

Stores.—Thin young cattle for farmers: yearlings, $10@20; two-year-olds, $14@30; three-year-olds, $22@40.

Sheep.—Per pound, live weight, 2¾@3c; extra, 3@5½c: sheep and lambs per head, in lots, $2.50@6¼c; lambs, 5@7¼c.

Fat Hogs.—Per pound, 5½@5¾c, live weight; shotes, wholesale, ...; retail, $1.50@5.00; country dressed hogs, 6½@6¾c.

Veal Calves.—3½@6c ⅌ lb.

Hides.—Brighton, 7@8c ⅌ lb; country lots 6½@6¾c.

Calf Skins.—75c@$1.60. Dairy skins, 40@60c.

Tallow.—Brighton, 4@5c ⅌ lb; country lots, 2@2½c.

Pelts.—75c@$1.40.

	Cattle.	Sheep.	Hogs.	Veals.	Horses.
Watertown	1484	4062	13,335	1533	535
Brighton...	1459	21	13,689	1247	110

	Cattle.	Sheep.
Maine. At Brighton.		
P A Berry	17	
Libby Bros	38	
Harris & Fellows	24	2
M D Holt & Son	20	
Thompson & Hanson	20	
F W Wormwell	11	
Wardwell & McIntire	22	1
J M Philbrook	7	18
C H Cobb	16	
S Tracy	4	
F L Howe	12	
New Hampshire. At Brighton		
At N E D M & Wool Co		
Northern via Nashua	25	
At Watertown.		
F Farwell	5	
H A Wilcox	7	
Breck & Wood	20	16
W F Wallace	59	22
Vermont. At Watertown.		
Fred Savage	18	12
H N Jenne	15	
F S Atwood	6	
G W Hall	9	30
B H Combs	24	
At N E D M & Wool Co		
Northern via Nashua	65	40
Canada At Watertown		
J S Henry	57	

	Cattle.	Sheep
New York. At Brighton		
J S Henry	14	
Massachusetts. At Watertown.		
J S Henry	22	22
W A Bardwell	10	33
O H Forbush	17	
W F Dennen	7	
At Brighton		
J S Henry	43	
R Connors	6	
Scattering	80	
H A Gilmore	20	
O H Forbush	8	
Dudley & Zollar	4	
E H Eames	6	
C D Lewis	17	
J P Day	3	
A M Baggs	14	
D A Walker	25	
Western At Brighton.		
W H Monroe	17	
Morris Beef Co.	527	
Swift & Co	272	
S S Learned	102	
Sturtevant & Haley	85	
At N E D M & Wool Co.		
N E D M & W Co	50	2400
At Watertown.		
W W Brauer & Co	401	1481
G A Sawyer	120	
J A Hathaway	548	

Export Traffic.

The shipments are not heavy, and the sale of cattle at English ports is at strong figures, ranging at 11½@12½c, as sold dressed weight. Cattle supplies were such as could be easily disposed of at the above quotation. From Boston for the week 1704 cattle, 1487 sheep, 167 horses.

Shipments and destinations—On steamer Peruvian for Glasgow, 237 cattle by J. H. Hathaway; on steamer Michigan, for Liverpool, 401 cattle, 1487 sheep by W. W. Brauer & Co.; on steamer Ultonia, for Liverpool, 282 cattle by Morris Beef Company, 226 State and 57 Canada cattle by J A. Hathaway; on steamer Bostonian, for London, 252 cattle by Swift & Co., 249 do. by Morris Beef Company, 167 horses by four different parties.

Horse Business.

There has been a good week in the horse business. Supply has been heavier and quicker sales have been effected. There is, however a scarcity of good driving horses, with considerable inquiry for them The sales largely for business horses, and such drivers as come to hand. At Welch & Hall's sale stable sales of 200 head, which includes acclimated horses The demand is for 1200@1300 lb horses for express wagons and the like; had a good week, at fair prices, with sales from $75@225. At L H. Brockway's sale stable the arrivals were light, and all were sold. Prices were steady. At A W Davis's Northampton street sale stable a good sale in speed, coach, family and saddle horses was had at $100@500. At Myer, Abrams & Co's 6½ carloads received, with good sales at $100@225 and acclimated horses at $25@90. At Moses Coleman & Sons good sales occurred, and price well sustained; several Shetland ponies at $125@200; general sales at $75@175.

Union Yards, Watertown.

Tuesday, April 24, 1900.

The market for beef cattle has not materially changed from last week. Western held steady at 4½@5½c. A number of Northern changed hands in the shape of cows and light stock. What were offered found sale and a clearance was affected. The Western for Boston market sold as follows: W. F. Wallace sold 9 beef cows, of 730@1530 lbs, at 2@3½c. O. H. Forbush sold beef cows, of 1120@1150 lbs, at 2½c and $3 20 ⅌ cwt. J. A. Hathaway, 15 steers, of 1525 lbs, at 5½c; 15 of 1500 lbs, at 5¼c; 20, of 1475 lbs, at 5c. 18, of 1460 lbs, at 4¾c; 20, of 1450 lbs, at 4½c.

Milch Cows.

Fair arrivals this morning. Quality compared favorably with last week. Prices range steady at $20@48; choice cows, $50@75.

Fat Hogs.

Those via West steady at 5½@5¾, l. w.; country hogs, 6¼@6¾c, d. w.

Sheep Houses.

Prices have not improved on any grade. The demand is somewhat light and arrivals of Western did not exceed 12 carloads, which cost steady prices. Sheep sold at $4.25@6.50 ⅌ cwt., and lambs from that source $5.25@7.50 ⅌ cwt. Two much dead mutton on the market G. W. Hall sold sheep at 4½c, of ordinary grade. W. F. Wallace sold 20 lambs of 1370 lbs, at 6c.

Veal Calves.

Supply somewhat heavy and if quality was not extra weakness in prices was noticed. H. N. Jenne sold some fancy calves, 25 of 3450 lb at 5⅞c; 26 do. of 3430 lbs at 5⅞c. G. W. Hall sold a large lot of calves at 5¼c W. F. Wallace sold 80 odd calves at 5¼c.

Live Poultry.

Sold at 10½c by the crate, for mixed lots.

Droves of Veal Calves.

Maine—P. A. Berry, 41; Libby Bros, 132; Harris & Fellows, 203; M. D. Holt & Son, 71; Thompson & Hanson, 30; F. W. Wormwell, 12; Wardwell & McIntire, 90; J. M. Philbrook, 73; C. H. Cobb, 28; S. Tracy, 8; F. L. Howe, 25.

New Hampshire—Northern via Nashua, 150; F. Farwell 75; T. J. Courser, 10; H. A. Wilcox, 28; Breck & Wood, 40; W. F. Wallace, 170.

Vermont—Fred Savage, 65; H. N. Jenne, 170; F. S. Atwood, 65; G. W. Hall, 140; B H. Combs, 10; G. H. Sprigg & Co., 175 via Nashua, 375.

Massachusetts—J. S. Henry, 144; W. H Bardwell, 12; W. F Dennen, 4; scattering, 175; H. A. Gilmore, 25; E. H. Eames, 4; C. D. Lewis, 10; J. P. Day, 30; A. M. Baggs, 5; D. A. Walker, 16.

New York—J. S. Henry, 271.

Brighton, Tuesday and Wednesday.

Stock at yards: 1459 cattle, 21 sheep, 13,689 hogs, 1247 calves, 110 horses. Maine, 196 cattle, 21 sheep 134 hogs, 713 calves. Massachusetts, 246 cattle, 155 hogs, 260 calves. New York, 14 cattle, 271 calves. West, 1003 cattle, 143,00 hogs, 110 horses.

Tuesday—1459 head of cattle yarded, of which 1003 were Western for home and foreign trade. The market was steady as regards prices on cattle. A firmness as quoted last week. The disposals were fairly easy. The best lots for beef from the East were by Thompson & Hanson 2 steers of 21½ months old, that weighed 2080 lbs, at 6c, l. w. These were fancy stock raised by David Grant of St. Albans. Me. sold by H. B. Goodnough, and the beef will be on exhibition at Nos. 69 & 71 Faneuil Market. A. M. Baggs sold 4 oxen, of 6920 lb., at 4¾c., 2 steers of 2500 lbs at 4c; 4 cows, of 4730 lbs, at 3¼c; 1 cow at 3c J. P. Day, 2 oxen, of 2800 lbs, at 3¾c. H. A. Gilmore, 11 cows, of 1000 lbs at 3½c. F. L Howe sold 2 oxen, of 2500 lbs, at 4½c. C. D Walker, 11 cattle, of 900@1480 lbs, at 2½@3½c.

Milch Cows.

The market was fairly stocked, not as heavy as some weeks, but all that the market required. Not much activity in the trade still the movement was fair and general disposals were effected at steady prices. C. D. Walker sold 1 springer $40 C. H. Cobb, 2 milch cows, $37.50 each. Thompson & Hanson sold 5 cows, $40@50; 1 cow, especially nice, at $65. F. L. Howe sold 2 cows at $40 each. F. W. Wormwell, 10 cows, $35@45.

Veal Calves.

1249 head on sale from Maine, Massachusetts and New York. Especially nice calves bring good firm prices; common grades ¼c lower G. H. Cobb sold 20 calves of 105 lbs, at 5c. Thompson & Hanson, 25 calves, of 130 lbs, at 5½c F. L. Howe, with 20 calves, av. 120 lbs, at 5½c. F. W. Wormwell, 12 calves, of 120 lbs, at 5½c.

Late Arrivals and Sales.

The market for milch cows holds a steady position, with no improvement Not much difficulty in the disposal of the better class of cows, but common grades go slowly. Beef cows in good demand at firm prices Libby Brothers sold 5 nice cows at $50 each, 8 cows and springers at $40@45; 8 co s at $28@38. Harris & Fellows sold milch cows at $35@50. J. S. Henry sold 10 choice cows, $50@58 8 cows of extra quality at $40@45; 5 cows, $30@35 W. Cullen sold 10 choice cows tops at $65 each. Wardwell & McIntire sold 1 fancy Dutch cow, $50. 6 cows and springers $40@45, with sales down to $30. Thompson & Hanson sold 8 cows, $30@35. P. A. Berry, 1 yearling bull $17; 2 milch cows $45 each; 2 at $42.50 each. G. H. Cobb, 7 beef cows, 850 lbs, at 3½c.

Store Pigs.

Moderate supply, with suckers at $1.50@2 50; shotes, $3.50@5 50

Boston Produce Market.

Wholesale Prices.

Poultry.

Fresh Killed.

Northern and Eastern—	
Green Ducks	10@12
Spring ducks	30@33
Green Geese	11@12
Chickens, common to good	10@13
Chickens, choice roasting	17@18
Chickens, Jersey	16@17
Chickens, spring broilers, ⅌ pair	75@1 00
Fowls, extra choice	12@
Fowls, common to good	10@11
Pigeons, tame ⅌ doz	1 00@1 25
Western frozen—	
Turkeys, choice hens	11@12
Turkeys, toms	9@10
Capons, fancy, large	13@14
Capons, small to medium	10@12
Chickens, choice, large	12@12½
Chickens, medium	10@11
Ducks	10@12
Geese	10@
Fowls, good to choice	9½@10
Old Cocks	7½@8

Live Poultry.

Fowls ⅌ lb	11@11½
Roosters ⅌ lb	5½@6
Spring Chickens ⅌ lb.	@

Butter.

NOTE.—Assorted sizes quoted below include 20, 30, 50 lb. tubs only.

Creamery, extra—	
Vt. & N. H. assorted sizes	18½@
Northern N. Y., assorted sizes	18½@
Northern N. Y., large tubs	18½@
Western, asst. spruce tubs	18½@
Western, large ash tubs	18½@
Creamery, northern firsts	17½@18
Creamery, western firsts	17½@18
Creamery, seconds	16@17
Creamery, eastern	17@
Dairy, Vt. extra	17@
Dairy N. Y. extra	17@
Dairy, N. Y. and Vt. firsts	16@
Dairy N. Y. and Vt. seconds	15@
Dairy, N. Y. and Vt. low grades	14@
West. imitation creamery, small tubs extra	15@
West imitation cr'y, large tubs firsts	15@
" imitation creamery seconds	14@
" ladle firsts and extras	14@15
" ladle seconds	14@
Boxes	
Extra northern creamery	19@
Extra western creamery	19@
Extra dairy	17@
Common to good	15@16
Trunk butter in ½ or ¼ lb prints	
Extra northern creamery	18½@19
Extra northern dairy	17@
Common to good	15@16
Extra western creamery	18½@

Cheese.

New York, small, extra ⅌ lb	11½@12
" " firsts ⅌ lb	10½@11
Vt. small extra ⅌ lb	11½@
" firsts ⅌ lb	10½@11
" seconds ⅌ lb	9@10
Western twins, extra	11½@
Western twins, fair to good	10½@11
Sage cheese, extra, ⅌ lb	11½@12½
Ohio Flats, extra	10@11

Eggs.

Nearby and Cape fancy, ⅌ doz	14@15
Eastern choice fresh	13@13½
Eastern fair to good	12@
Ill. and Ind. fancy fresh	12½@12¾
Vt. and N.H. choice fresh	13@13½
Western fair to good	11½@12
Western selected, fresh	12½@

Potatoes

Native, ⅌ bu—	
Green Mountain	50@53
Rose and Hebrons, extra	40@50
York State, rural, per bu	45@
" " long white, ⅌ bu	40@

Sweet Potatoes.

Jersey, extra, d h ⅌ bbl	2 50@3 00

Green Vegetables.

Beets, native ⅌ bushel	65@1 00
new, ⅌ doz bunches	1 75@1 80
Cabbage, new, ⅌ crate	3 50@4 00
" ⅌ bbl	2 50@3 00
Carrots ⅌ bu	65@75
" new, ⅌ hundred	2 00@4 00
Lettuce, ⅌ box	1 50@2 00
Onions, native, ⅌ bbl	1 50@2 00
Onions, Havana, crate	1 25@1 60
Parsley, ⅌ bu	1 50@1 75
Radishes, ⅌ doz	30@35
String beans—	
Southern choice, ⅌ crate	2 50@3 50
Southern, fair to good	1 50@2 00
Squash, marrow, ⅌ bbl	2 00@
Rhubarb, ⅌ lb	9@10
Squash, Hubbard, ⅌ ton	40 00@
Spinach, native, ⅌ bu	90@1 00
Spinach, Norfolk, ⅌ bbl	1 50@1 75
Turnips, flat, ⅌ box	40@50
Turnips, St. Andrews, ⅌ bbl	90@1 00
Tomatoes, hothouse, ⅌ lb	25@
" Southern ⅌ carrier	2 50@3 50

Domestic Green Fruit.

Apples—	
Baldwin ⅌ bbl	3 00@4 25
Ben Davis, ⅌ bbl	3,00@4 50
Greenings, ⅌ bbl	3 00@3 50
Mixed varieties, ⅌ bbl	2 50@3 25

Nuts.

Peanuts, Va., H. P. No. 1 ⅌ lb	4@4¼
Peanuts, Va. No. 2 ⅌ lb	3¼@
Shellbarks	50@1 00

Tallow.

Rough, ⅌ lb	1@2
Rendered	3½@4

Honey.

York State—	
Clover, comb, fancy ⅌ lb	14@16
Clover, comb, fair to good ⅌ lb	11@13

Hides and Pelts.

Steers and cows all weights	7@
Bulls	6½@
Hides, south, light green salted	8@8½
" " dry flint	16½@17
" " " salted	14½@15
" buff, in west	8½@ 9¼
" " salted ⅌ lb	8¼@11¼
Calfskins, 5 to 12 lbs each	95@1 65
" overweights, each	1 90@1 95
Deacon and dairy skins	55@60
Lambskins each, country	50@1 00
Country Pelts, each	60@1 00

Peas.

Choice Canadian ⅌ bu	1 15@
Common " "	1 00@1 10
Green peas, Western choice	1 25@1 30
Green peas, Scotch	1 30@1 35

Dried Apples.

Evaporated, fancy to extra fancy	7½@8½
Evaporated, choice	6¼@7
Evaporated, prime	5¾@6[illegible]
Sundried, as to quality	4@5

Grass Seeds.

Timothy, ⅌ bu	1 35@1 5
Clover, ⅌ lb	8@9c
Red Top, western, ⅌ 50 lb sack	2 00@2¼
fancy recleaned, ⅌ lb	9@10 25

Beans.

Pea, marrow, choice, H. P	2 20@2 25
Pea, screened	1 90@2 00
Pea, seconds	1 50@1 75
Pea, Cal., small white	2 30@
Pea, foreign	2 00@2 10
Mediums, choice hand picked	2 20@2 25
Mediums, screened	1 90@2 00
Mediums, foreign	2 00@2 10
Yellow eyes, extra	2 25@2 30
Yellow eyes seconds	1 90@2 20
Red Kidney	2 00@2 30
Lima beans, dried ⅌ lb	6@

Hay and Straw.

Hay prime, bales	16 50@17 50
" No. 1, ⅌ ton	16 00@16 50
" " 2 "	14 50@15 50
" " 3 "	13 00@14 00
" fine choice	13 00@14 00
" clover mixed, ⅌ ton	13 00@14 00
" clover, ⅌ ton	13 00@
" swale, ⅌ ton	8 00@ 9 00
Straw prime rye	14 00@14 50
Straw, oat, per ton	8 00@ 9 00
Straw tangled rye	9 00@10 00

Flour and Grain.

Flour.—The market quoted quiet.
Spring patents, $3 70@4 40.
Spring, clear and straight, $2 90@3 50.
Winter patents, $3 70@4 35.
Winter, clear and straight, $3 25@4 00.

Corn Meal.—The market is steady at 93@95c ⅌ bag, and $2 05@2 10 ⅌ bbl; granulated, $2 25@2 50 ⅌ bbl; bolted, $2 25@2 50.

Graham Flour.—Trade continues quiet, with the market quoted at $2 40@4 00 ⅌ bbl.

Oat Meal.—Quoted steady, $3 15@3 50 ⅌ bbl for ground and rolled, and $3 55@3 90 for cut.

Rye Flour.—The market is quoted at $3 00@3 30 ⅌ bbl.

Corn.—Demand is quiet with market steady.
No 2 yellow, spot, 47@47½c.
Steamer yellow, new. 47@47½c.
No. 3 yellow, new, 47@47½c.

Oats.—Quiet but steady.
Clipped, fancy, spot, 34½@34¾c.
No. 2 clipped, white, 3[illegible]¾c.
No. 3 clipped, white, 31½c.
Lighter grades, spot, 32@32½c.
Clipped, to ship, 34@34½c.

Millfeed.—The market is steady for all kinds.
Middlings, sacked. $16 50@18 00.
Bran, spring, $16 75.
Bran, winter, $18 25.
Red Dog, $18 00.
Mixed feed, $18 50@19 50.
Cottonseed meal to ship, $25 50@26 00.

Malt.—The market is steady with trace ruling dull.
State grades, 6-rowed, 57@60c.
State, 2 rowed, 54@55c.
Western grades, 54@56c.

Barley—Quiet demand, with prices nominal at 50@76c for No. 2 6-rowed State, and 42@57c for No. 2 2-rowed State.

Rye.—Quiet, 65@70c.

The Wool Market.

Unwashed fleece, fine, Michigan	19@20
" " " Ohio	22@24
" " ¼-blood "	27@28
" " ⅜ blood "	27@28
" " ½-blood "	27@28
Fine delaine, Ohio	35@37
" " Michigan	33@34
Washed fleece	25@36

PROFITABLE GARDENING.

Ten years ago, says the Concord (N. H.) Patriot, Joseph Dow bought 30 acres of rough land on the Bow Hills, cleared it gradually and began growing small fruits and vegetables. He now has the land paid for, a new two-story house, barn and outbuildings, and this year cultivated three acres in strawberries, 1½ in raspberries, 1½ in blackberries, 1½ in musk and watermelons, one in tomatoes, one in squashes, three-fourths of an acre in onions, 1½ in turnips, two in potatoes, three in corn. In addition, enough hay is raised to keep four horses, with several tons for market. When bought, the farm would not cut hay enough for one cow. Another source of increase is from sale of strawberry, raspberry and blackberry plants. Hard labor, energy and perseverance will secure a good living even on the rugged hills of New Hampshire.

PEDIGREED STOCK.

If the time to begin the education of a boy should commence at the birth of his grandparents as has been said, the time for the selection of breeding animals should begin equally early. Herein lies the value of a pedigree for all farm stock, but it should be unbroken, not only in the line of descent, but in the possession of those qualities desired in the future animal. A neglect to conform with this requirement has caused some to lose faith in the importance of hereditary influence. "There are black sheep in every flock," is an old saying, and if one desires white lambs it is not well to accept the black sheep to produce them from, no matter how white its ancestors may have been. This is equally true in breeding any animals for special purposes. If one is not true to the characteristics of the breed, not the bluest of blood should lead to its preservation to perpetuate the breed.

UNPROFITABLE GARDENING.

A New York paper makes the astonishing statement that along the New Jersey coast eight out of every ten farmers are engaged in "truck farming" or growing vegetables and small fruits for market, and as a result their farms are mortgaged and the farmers are so deeply in debt that they see no chance of ever working out of it. They have abandoned everything else to make a specialty of these garden crops, have to buy all supplies for their families, and find themselves behind every year. Yet the work is so pleasant and the prices so tempting that they cannot decide to give it up. We cannot credit this, and think some one has been hoaxing the person who wrote that paragraph. Gardeners and fruit growers around here find their work harder than that of the average farmer, but if prices are satisfactory they are not losing any money. We know of but one experienced gardener who denounced the business, and as he is supposed to be worth $100,000 made in the business he can go on losing money for some years yet, before he is likely to be obliged to mortgage his land. Read the account of a gardener and fruit grower in New Hampshire, elsewhere in this column, and see what truck farming has done for one man.

SELECTION OF BREEDING EWES.

The choice of ewe lambs to increase the flocks should be begun while they are running with the parent, and should be first made to depend upon what is known of her. If she has produced good lambs and has proven to have abundance of milk, it may be expected that this quality is likely to be transmitted to her ewe lambs, or through her ram lambs to the next generation The production of twins or triplets is largely hereditary, and the number of such can be increased by those who think it desirable by the saving of ewe lambs that are from ewes dropping twins. In a similar manner one who knows the ewes can choose lambs to mature early, to fatten easily, or to yield heavy fleeces, as they may think most desirable, and such as are chosen in this way should be marked, and their development watched. If they show faults later on they can be culled out and should be. If we had 50 lambs and wanted to increase our flock by 20 we would reserve 30 until well grown to select from, and when we made a final choice we would be able to give our reason for reserving each one. It might not be a good reason, or might not seem so to others who were building up a flock upon a different principle, but no system at all is worse than one that is closely followed until its faults have been made apparent by the test of time.

The proper place of the silo on every farm and the value of ensilage has been so frequently advocated in these columns that it is not our purpose now to more than re-emphasize the whole subject. Doubtless many are deterred from building a silo through the idea which very generally obtains that a silo is an expensive luxury, obtainable only by those of large means. However, our attention has been called to a little pamphlet sent us by the Williams Manufacturing Company, Kalamazoo, Mich., which illustrates by photographic views their line of "Kalamazoo Silos" which are favorably known wherever introduced. They are cylindrical and of varying capacity. Although made of either larch or white pine, the manufacturers make a specialty of Washington Red Cedar, which seems to resist the action of the elements from without, and the chemical products generated by the ensilage from within. An interesting instance of the indestructibility of this material is shown by a photograph of a red cedar log still sound and solid which fell in the forest centuries ago, so long ago, in fact, that another cedar has sprung from either side, and grown like an arch over it to a diameter of eight feet. This certainly endorses red cedar as the best material for stave silos. But send for the booklet and learn further particulars about their line. Address Williams Manufacturing Company, Kalamazoo, Mich., and mention this paper

Z. M. Maynard of Forsyth, Ga., who recently purchased a Berkshire boar from Hood Farm, Lowell, Mass., writes as follows: "The boar arrived promptly and in good condition. Don't know as I ever saw a finer one anywhere. Am well pleased and think him a perfect beauty. He is doing splendidly and growing very fast. A friend of mine ordered a boar from another breeder when I ordered this. He paid the same price, but mine is a much finer boar in every respect."

VALUE OF NITRATE OF SODA.

In a trial made at the New Jersey Experiment Station to test the value of nitrate of soda for garden beets in different quantities, they put on 400, 500, 600 and 700 pounds per acre on four respective lots. These lots averaged to yield 63 per cent. more at first pulling and 135 per cent. more four days later than did a plot of same size without nitrate of soda. The beets were earlier and yield greater, and the best yield and largest profit per acre $27 10, was where 700 pounds was used. Upon plots four-tenths of an acre each, set in tomatoes, the tests were 150 pounds of nitrate of soda against 120 pounds sulphate of ammonia, or 200 pounds dried blood. The earliest tomatoes, the largest number of prime fruits, the largest yield and the largest money return, $215 52 per acre, was on the nitrate of soda plot The sulphate of ammonia came next with crop worth $186.79 per acre, dried blood last with $121 67 worth, and a plot without either produced only $51 02 per acre. On muskmelons 150 pounds per acre of nitrate of soda produced better results than larger amounts, and better than either sulphate of ammonia or dried blood in quantities used, but on sweet corn the results were reversed, dried blood proving best and nitrate of soda giving smallest yield.

—Statistics collected in Bavaria and Sweden prove that hard water tends to preserve the teeth, and that diseased teeth increase with the lessening of the earthy salts in the drinking water.

—A German authority has recently announced the discovery of a tree in the forests of central India which has most curious characteristics. The leaves of the tree are of a highly sensitive nature, and so full of electricity that whoever touches one of them receives an electric shock. It has a very singular effect upon a magnetic needle, and will influence it at a distance of even seventy feet. The electrical strength of the tree varies according to the time of day, it being strongest at midday and weakest at midnight. In wet weather its powers disappear altogether. Birds never approach the tree, nor have insects ever been seen upon it.

TO THE HONORABLE THE JUDGES OF THE PROBATE COURT IN AND FOR THE COUNTY OF MIDDLESEX:

RESPECTFULLY represents Margaret Holden of Cambridge, in said County, widow, that she is of the age of twenty-one years or upwards, and is desirous of adopting John J McCarthy of Cambridge a child of Florence McCarthy residence unknown formerly of Boston, in the County of Suffolk, and Anastasia, his wife, which said child was born in Boston, Mass., on the second day of February, A. D. 1889; that Florence McCarthy, father of said J hu J. McCarthy, has wilfully deserted and neglected to provide proper care and maintenance for said child for more than two years next preceding the date of this petition, and that the mother of said John J McCarthy is deceased.

Wherefore she prays for leave to adopt said child, and that his name may be changed to that of JOHN JOSEPH HOLDEN.

Dated this fourteenth day of April, A. D. 1900.

MARGARET HOLDEN her X mark

Witness: EDWARD J. BRANDON.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

ON the foregoing petition it is ordered that the petitioners notify the said Florence McCarthy to appear at a Probate Court to be held at Cambridge, in said County of Middlesex, on the twenty-second day of May, A. D. 1900, at nine o'clock in the forenoon, to show cause, if any he has, why the same should not be granted, by serving him a copy of said petition and this order seven days before said Court or if he be not found within this Commonwealth, by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be seven days, at least, before said Court.

Witness, CHARLES J MCINTIRE, Esquire, First Judge of said Court, this sixteenth day of April, in the year one thousand nine hundred.

S. H. FOLSOM, Register.

FARMERS' WANTS

ONE CENT A WORD.

Farmers' Want Department is established to allow the sale and exchange of Stock, Seeds, Fruits, etc., also Help or Situation Wanted. There is a charge of one cent per word only, including name, address or initials No Display. Cash to accompany the order.

ASPARAGUS Roots and Strawberry Plants. Send to GEORGE F. WHEELER, Concord, Mass., for catalogue.

BIGELOW FARM, Petersham, Mass., offers Stock, Waits, Holland turkey eggs, $2 a dozen.

BARRED PLYMOUTH ROCK, Rose Comb Browns, Leghorn, White, Wyandottes Pekin Ducks, Stock and Eggs. VERNAN CHASE & SON, Reading, Mass.

BUFF WYANDOTTES, Mattison and Buffington strain; eggs $1.50 per 13; Rose and Single Comb Rhode Island Reds, Cushman and Snow strain, $1 50 per 15. Good hatch guaranteed. ARTHUR WAITE, Rockville, Mass.

BERRY baskets. Buy now while cheap. CHARLES L. ALLEN, Terryville, Ct.

BUFF WYANDOTTES, Buff Rocks (Boston and New York winners). Perfection strain only Eggs $3 00 per 15. (Circulars) FIELD, Somers, Ct.

CHOICE Jersey Wakefield cabbage plants, wintered in cold frames; none but good, stocky plants will be sent out. Price, $4 per thousand. ALBERT S. WALKER, South Portsmouth, R I.

CHEAP. One six-horse power vertical engine boiler. Second hand, new engines, boilers, pumps, Wood Splitters, belting, etc. 29 Oak street, Springfield, Mass.

OATS, all about them. Send for illustrated circular. WALNUT RIDGE FARMS, Box 2028 Boston.

DAHLIAS—20 kinds, $1. H. F. BURT, Taunton, Mass.

FINE Golden and Silver Wyandotte stock and eggs. Breeder over 15 years. F. S. TENNEY, Box M, Peterboro, N. H.

FOR SALE. Registered Dorset Rams. MAPLEMONT STOCK FARM Albany, Vt.

FARM FENCE 18 to 24 cents per rod. Built without machine. First inquiry where not introduced, gets special terms and agency. BUCHANAN FENCE CO., Box 14 Smithville, O.

MY CATALOGUE FOR 1900 sent FREE tells you why my Second-Crop Seed Potatoes are so much superior to any other seed potatoes grown. Johnson's New Early Strawberry; 50 other choice kinds as fine as grow, etc. J. W. HALL, Marion Sta., Md.

MAPLE Sugar and Syrup. For sale by MAPLEMONT STOCK FARM, Albany, Vt.

MILLBROOK FARM, West Warren, Mass. Seed potatoes, $2.00 to $3.25 barrel. Circulars.

ROSE Comb Rhode Island Reds, exclusively. Farm raised; great winter layers. Eggs from first premium birds $1.50 for 15. MAPLEWOOD POULTRY YARDS, Milton, Vt.

ROSES, Dahlias, Hardy Perennials. Send for list. THE ROSARY, Westfield, N. J.

REGISTERED Collie Shepherd pups for sale MAPLEMONT STOCK FARM, Albany, Vt

RHODE ISLAND RED eggs, large and brown from choice, farm-raised hens. $1 per 13. J. PRESTON HOWARD, Easton, Mass.

REGISTERED HEREFORD BULLS for sale. CHARLES FRENCH, Solon, Me.

SEED potatoes from Aroostook County, the most northern point from which seed potatoes can be obtained; from the largest individual grower and shipper of pure seed of special varieties in Maine. Four seed farms, 640 acres. From 1899 crop were harvested 25 000 bushels, consisting of 30 varieties Send for catalogue with prices delivered at your railroad station. E. K. PARKHURST, Presque Isle, Me.

SEED POTATOES. Best pure stock, leading early and late varieties, cheap. Illustrated catalogue free. A. G. ALDRIDGE, Fishers, N. Y.

STRAWBERRY plants a specialty. Catalogue free. HITCHCOCK'S NURSERY, Springfield, Mass.

THOROUGHBRED Buff Rocks. 16 eggs $1. FRED S. SHEPARD, Hartland, Vt.

VAUGHN'S (bred to lay) White Wyandottes were winners at Athol fair, 1899 Announcement free. LYONS HILL POULTRY FARM, Athol Centre, Mass.

WHITE Wyandotte eggs for hatching, $1 per 13. R. B. ANDREWS, Boylston Centre, Mass.

WANTED—Situation on a farm for a strong boy where he could have a good home and farm training. Address, BOX 252, Sharon, Mass

WANTED—To rent, a small farm in Vermont, where can get work by day or month; thoroughly understand farm work. MARTIN, 139 Warren street, Glens Falls, N. Y.

WANTED—Farm, stock, tools, on shares near good market; with some one who wants reliable party; take full care. E. NORTH, Leominster, Mass.

WANTED, you to buy my 140 acre farm, keeps 20 cows, 2000 sugar trees. Handsome 12 room house, good barns, running water, fruit, 3½ miles to town and station. Price $1050. GUNN & CO., Brattleboro, Vt.

WANTED—To purchase pair white Angora cats. BOX 2023, Boston, Mass.

WANTED—A position in a first-class creamery as superintendent or butter maker; have had ten years' experience; can give good references. Address C., P. O. Box 142, Farmington. Ct.

WANTED—To hire, farm stocked, or manager for wages. References; state wages; experienced; married American. FISK. Williamsburg, Mass.

WANTED—Reliable man to work on farm for one year; good milker and teamster. Reference required. Address A. D. SAXTON, Waterbury, Ct.

Mortgagee's Sale.

BY VIRTUE of the power of sale contained in a certain mortgage deed, given by Josiah Greene to John Orrell, dated Feb. 27 1897 and recorded with Suffolk Deeds Book 2426, Page 147, and duly assigned to the subscriber for breach of the conditions of said mortgage, will be sold at public auction on the premises hereinafter described, on Tuesday, the fifteenth day of May A. D. 1900, at nine o'clock in the forenoon of said day, all and singular the premises conveyed by said mortgage viz.: A certain parcel of land with the improvements thereon situated in that part of Boston called Brighton, being lot numbered sixty (60) on a plan of land made by Frank A. Foster, C E., dated Jan 1, 1897, and recorded with Suffolk Deeds. Said premises are bounded and described as follows:—Northerly by lot numbered sixty one (61) on said plan, seventy-nine 79 feet; Southerly by lot numbered fifty-nine 59, seventy nine 79 feet; Westerly by lot numbered fifty-seven (57) on said plan forty five 45 feet; Easterly by Antwerp street, on said plan forty-five 45 feet. Containing three thousand five hundred and fifty five 3555 square feet. Said premises are to be sold subject to any unpaid taxes or assessments. Terms at time of sale.

GEORGE I ROBBINSON JR.,
Present Holder of said Mortgage.

Boston, April 17, 1900.

TO THE HONORABLE THE JUDGES OF THE PROBATE COURT IN AND FOR THE COUNTY OF ESSEX:

RESPECTFULLY represents Charles F Johnson of Swampscott, in said County of Essex, and Sarah J. Johnson, his wife, that they are of the age of twenty-one years or upwards, and are desirous of adopting EDWIN G. LOWE of Swampscott aforesaid, a child of George E. Lowe, now of parts unknown, and Henrietta Amelia Lowe, his wife, which said child was born in Wrentham, Massachusetts, on the twenty-sixth day of November A. D. 1896; that the father has wilfully deserted and neglected to provide proper care and maintenance for such child for two years next preceding the date of this petition: he has suffered such child to be supported for more than two years continuously prior to this petition as a pauper the last part of which to wit: Eleven months by a charitable institution incorporated by law, and the mother surrendered said child to the Children's Health Fund, a corporation established under the laws of the Commonwealth of Massachusetts

Wherefore they pray for leave to adopt said child, and that his name may be changed to that of CHARLES EDWARD JOHNSON.

Dated this second day of April, A D. 1900.

CHARLES F. JOHNSON,
SARAH J. JOHNSON.

The undersigned, being the Attorney of the Children's Health Fund and Guardian of said child, hereby consents to the adoption, as above prayed for. GEORGE W AVERELL.

Commonwealth of Massachusetts.

ESSEX, SS.

PROBATE COURT.

ON the foregoing petition it is ordered, that the petitioners notify George E. Lowe, father of Edwin G. Lowe, to appear at a Probate Court to be held at Salem, in said County of Essex, on the seventh day of May, A D 1900, at nine o clock in the forenoon, to show cause if any he has, why the same should not be granted, by serving him with a copy of said petition and this order seven days before said Court, or if he be not found within this Commonwealth, by publishing the same once in each week, for three successive weeks in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be seven days, at least, before said Court.

Witness, ROLLIN E. HARMON, Esquire, Judge of said Court, this fifth day of April, in the year one thousand nine hundred

J T. MAHONEY, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs at-law, next of kin, creditors, and all other persons interested in the estate of FANNIE S. CUTLER, late of Bedford, in said County, deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased to Clara B. Cutler of Bedford in said County, or to some other suitable person

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County of Middlesex, on the first day of May, A. D 1900, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this ninth day of April in the year one thousand nine hundred.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To all persons interested in the estate of WILLIAM H. SMITH 2d, late of Lexington, in said County, deceased.

WHEREAS, George O Smith, the administrator of the estate of said deceased, has presented for allowance the first and final account of his administration upon the estate of said deceased:

You are hereby cited to appear at a Probate Court, to be held at Cambridge, in said County, on the first day of May A. D 1900 at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be allowed.

And said administrator is ordered to serve this citation by delivering a copy thereof to all persons interested in the estate fourteen days at least before said Court, or by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court, and by mailing, postpaid, a copy of this citation to all known persons interested in the estate seven days at least before said Court.

Witness, CHARLES J MCINTIRE Esquire, First Judge of said Court, this ninth day of April in the year one thousand nine hundred

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs at law and all other persons interested in the estate of CHARLES D. KENDALL, late of Stoneham in said County, deceased.

WHEREAS, Mary E. Kendall, administratrix of the estate of said deceased, has presented to said Court her petition for license to sell at private sale, in accordance with the offer named in said petition, or upon such terms as may be adjudged best, the whole of certain parcels of the real estate of said deceased for the payment of debts and charges of administration, and for other reasons set forth in said petition.

You are hereby cited to appear at a Probate Court to be held at Cambridge, in said County, on the first day of May, A. D., 1900, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is ordered to serve this citation by delivering a copy thereof to each person interested in the estate fourteen days at least before said Court, or by publishing the same once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness CHARLES J. MCINTIRE, Esq., First Judge of said Court, this fifth day of April, in the year one thousand nine hundred.

S. H FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at law next of kin, and all other persons interested in the estate of CHARLES H WEBSTER late of Medford in said County, deceased.

WHEREAS, a certain instrument purporting to be the last will and testament of said deceased has been presented to said Court for probate by Jessie S. Webster, who prays that letters testamentary may be issued to her, the executrix therein named, without giving a surety on her official bond.

You are hereby cited to appear at a Probate Court to be held at Cambridge, in said County of Middlesex, on the twenty-second day of May A. D. 1900, at nine o'clock in the forenoon, to show cause, if any you have, why the same should not be granted.

And said petitioner is hereby directed to give public notice thereof by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day at least, before said Court, and by mailing postpaid, or delivering a copy of this citation to all known persons interested in the estate, seven days at least before said Court

Witness CHARLES J. MCINTIRE Esquire. First Judge of said Court, this twenty-fifth day of April, in the year one thousand nine hundred.

S. H. FOLSOM, Register.

Commonwealth of Massachusetts.

MIDDLESEX, SS.

PROBATE COURT.

To the heirs-at-law, next of kin, creditors and all other persons interested in the estate of ELIZA CROMIE, late of Newton in said County deceased, intestate.

WHEREAS, a petition has been presented to said Court to grant a letter of administration on the estate of said deceased to George P. Davis of Brookline in the County of Norfolk, without giving a surety on his bond

You are hereby cited to appear at a Probate Court to be held at Cambridge, in said County of Middlesex, on the eighth day of May A. D. 1900, at nine o clock in the forenoon, to show cause if any you have, why the same should not be granted.

And the petitioner is hereby directed to give public notice thereof, by publishing this citation once in each week, for three successive weeks, in the MASSACHUSETTS PLOUGHMAN, a newspaper published in Boston, the last publication to be one day, at least, before said Court.

Witness, CHARLES J. MCINTIRE, Esquire, First Judge of said Court, this twelfth day of April, in the year one thousand nine hundred.

S. H. FOLSOM, Register.

OUR HOMES.

Easter and Patriots' Day.

Two festivals of such widely differing significance, recurring within a single week, make this, the last April of the century, somewhat unique in this Commonwealth. Easter, in heralding the resurrection, typifies renewal, a passing away of the old and beginning of the new, and today, bursting buds, murmuring brooks and song of birds give evidence that the earth is awakening from its long sleep, and every heart thrills with joy.

No day of all the year has such spiritual significance as Easter. As the natural world takes on new life and color and beauty at this time, so the soul of man, stimulated and inspired by the consciousness of a risen Christ, awakens to new activity, and plumes itself for loftier flight and nobler endeavor. In the churches, inspired utterances, the fragrant breath of lilies and sweetest music express the general feeling of joyousness, and noble hearts everywhere radiate the sunlight of sympathy into lives made cheerless by illness or sorrow. Truly, Easter is a time of spiritual uplift ment and of regeneration.

Patriots' Day is one of remembrance, a day consecrated to patriotism, which is a spiritual quality, though not always recognized as such, and far less appreciated than it should be. There is no trait in human character so unselfish as true patriotism. By this is not meant the mere "eagle screaming" which often poses as such, but the healthy sentiment which impels one to put aside personal considerations of every sort, and seek rather the welfare of the community, of the State, or of the nation.

Genuine patriotism is evidenced as clearly in the performance of civic duties in times of peace as upon the battlefield when the gravest problems seem to demand settlement by force of arms. Such days as Patriots' Day serve to keep fresh the memories of the past, not because of the occurrences themselves, for deeds of violence and bloodshed are not pleasant to contemplate; but because of what we enjoy today as the outcome of those momentous events.

Three great wars were begun in April, and in each the nineteenth has been a day of peculiar significance. It is fitting, therefore, that we celebrate it, and it is quite possible to do so in a spirit appropriate to the Easter season. As the gladness and brightness of these April days follow the gloom and chill of winter, so the glorious light of human advancement has followed the deeds we commemorate.

There is no month of the entire year more replete with object lessons for young students of American history than April. Not only did the great civil war begin in this month, but the final scene at Appomattox was likewise enacted therein, and before its close the abounding joy caused by that fortunate culmination was changed to bitterest grief because of the tragedy which terminated the earthly career of the great man who had been the guiding star of the nation through its days of extremest peril.

Our flag, which we so revere, was finally adopted by subsequent congressional amendment in its present form in April, 1818, and we might multiply instances which make these April days of especial historic interest. It is rather the significance of the festivals of the present week which we would present, and their great lessons, so valuable to young and old,—that of Easter, hope, faith, courage and inspiration; of Patriots' Day, unselfishness, self sacrifice, honor and devotion. In the church, the home and the school these lessons cannot be too strongly presented.

ELIZABETH ROBBINS BERRY.

The Workbox.

KNITTED GOLF STOCKING

Bicycle and golf stockings are knitted by hand to secure a certain rough, heavy finish, which cannot be produced by machinery. Fleishen's German knitting worsted is specially made and adapted for these stockings. The leg is knitted of the heavier yarn and the foot of a lighter make.

Procure four No. 15 steel needles, four ounces of brown mixture, two ounces of red mixture, two ounces gray mixture, one ounce blue mixture, one ounce orange mixture, two ounces light weight brown mixture, Fleishen's German knitting worsted. Cast on 72 stitches, 24 on each of three needles. Do 60 rounds of ribbing, 2 plain, purl 2, alternately.

Three rounds of brown, three gray, one orange, three gray, three brown, three red, one blue, three red, repeat. Then knit 1 plain round, and increase the leg 11 stitches After knitting the top, turn the work inside out, that the knitting of the leg may come on the right side of the leg.

Eighty-three stitches are now on three needles, on the first needle 29 stitches, second needle, 25 stitches, third needle 29 stitches.

1st row—Knit 5 brown, 1 blue, 5 brown, purl 2 brown, knit 1 brown, 1 blue, 1 brown, purl 2 brown, repeat around the leg.

2d row—Four brown, 1 gray, 1 blue, 1 gray, 4 brown, purl 2 brown, knit 1 brown, 1 blue, 1 brown, purl 2 brown.

3d row—Three brown, 2 gray, 1 blue, 2 gray, 3 brown, purl 2 brown, knit 1 brown, 1 blue, 1 brown, purl 2 brown.

4th row—Two brown, 3 gray, 1 blue, 3 gray, 2 brown, purl 2 brown, knit 1 brown, 1 blue, 1 brown, purl 2 brown.

5th row—Knit 1 brown, 4 gray, 1 brown, 4 gray, 1 brown, purl two brown, knit 1 brown, 1 blue, 1 brown, purl 2 brown,

6th row—Five gray, 1 blue, 5 gray, purl 2 brown, knit 1 brown, 1 blue, 1 brown.

This row is centre of diamond pattern of stripe; reverse and repeat, and knit 13th round, 1 stitch brown, 1 orange, 1 brown, repeat around the leg. Repeat the diamond pattern, but alternate the color of diamond from gray to red mixture. The leg is shaped in the following manner, disregarding the pattern: The narrowing is done after five diamonds are knitted, by knitting the two stitches next to the last stitch on either side of the seam, purling the last stitch for the seam. Decrease after every three rounds until you have lost 22 stitches. Then take 16 stitches from one side of heel, and 15 from the other side, and cast them on one needle for the heel. The remaining 30 stitches divide on two needles. After knitting the heel for 18 rows in brown mixture, break off the wool. Knit on front of the foot three diamonds long across and back, and break off wool. Take the lighter weight of yarn and continue with the heel eight rows. You have now an uneven number of stitches on the needle. Knit the centre stitch; then narrow, 1 plain, turn, slip first stitch, purl back to the centre stitch, narrowing next 2 stitches, purling 1, turn, knit plain till you reach first narrowed stitch, pick that stitch up with a new stitch, knit together, knit 1 plain, turn, repeat till you have picked up all the stitches on either side of the needle. Pick up the side stitches of the heel on two needles, divide the gusset in equal parts on each needle, knit back and forth, picking up one stitch from front at each end of row on every round. Narrow the two stitches next to the last on either end of the row on every other row till 21 stitches are on each needle. Knit till even with front and pick up front stitches and knit around. Knit 32 rows. Narrow at the end of every needle on every round till the toe is made.

EVA M. NILES.

The Deadliest Poisons.

Most people don't realize how deadly some poisons are, said one of the leading druggists. The discoverer of prussic acid was instantly killed by inhaling one whiff of his own handiwork.

Pure prussic acid is never sold or handled. The smell of it is always fatal. It kills, not in three minutes or half an hour, but the instant it enters the lungs as a gas. The mixtures ordinarily sold as prussic acid is ninety eight parts water to two parts of the drug. Even in this form it is very deadly. A twenty per cent. mixture of the acid would kill nearly as quickly as if pure.

Atropine, though it has no harmful odor, is so deadly that as much of it as would adhere to the end of a moistened forefinger would instantly cause death.

Cyanide of potassium has a pleasant smell, which is not injurious, but a small quantity swallowed kills at once.

Pure ammonia if inhaled would cause death almost as quickly as prussic acid.

When a carboy of nitric acid is broken, some one has to suffer. It will burn wood, eat through iron plates and destroy whatever it touches. Such an accident once happened in an acid factory. Every one ran away, leaving the acid to amuse itself by setting fire to things. Soon it was seen that the building would be destroyed and hundreds of people thrown out of work, and four men volunteered to put out the fire in the acid room. They succeeded and came out feeling all right. Five hours later all were dead.—Scientific Journal.

The Cooking of Fish.

That fish is almost invaluable as a food is well known; although its actual proportion of flesh-forming material is low compared with beef or other meats, it contains a large proportion of phosphorus, which is necessary for the nourishment of the brain, and even in this particular fish differ as to their nutritive value. The white varieties—such as cod, haddock, halibut, sole and flounder—contain but a small per cent. of solid nutritive matter, and for this reason are usually served with butter sauce. Other fish, such as mackerel, salmon and herring, are richer in fat and contain more nutritive matter, but because of their fat are somewhat difficult to digest. Of the shell fish, whose nutritive value is on a par with white varieties of fish, oysters are most digestible, scallops, shrimps, lobsters and crabs following in the order named.

In selecting fish, it is well to remember that it cannot be too fresh; then the flesh of a fresh fish is firm and elastic, leaving little or no depression if pressed with the fingers, and also that the eyes of fresh fish are bright not glassy.

In cooking, it is best to boil or bake a large fish. When boiled, they should be served quite plain with potatoes steamed and peeled, and a buttered sauce flavored with a more tasty fish, such as lobster or oysters or herbs. Most fish admit of boiling; it is usual to prepare them for this process by washing them in strong vinegar; they should not be allowed to soak in it, however.

All large fish with the skins whole should be put in cold water, first carefully wrapped in a cloth, but the smaller varieties of fish in slices require more rapid cooking, and should be plunged into boiling water at once. By this way the cut surfaces are hardened and closed and the juices of the fish prevented from boiling out. No more water than will just cover the fish should be used, or the skin will crack and the juices escape. As fast as scum rises on the water it should be taken away, and after it has come to a boil a tablespoonful of salt added to each quart of water is advisable. The fish is said to be done when the flesh begins to leave the bone, but if a fish has been cooked steadily by simmering instead of fast boiling, the skin may remain quite sound and yet the flesh be sufficiently cooked. The best method of learning whether it be entirely cooked is by pushing a wooden skewer through the thickest part; if it goes in easily it is done.

As soon as the fish is cooked, lift out and let it drain thoroughly; then untie the cloth and transfer the cooked fish to a heated dish. The water the fish is boiled in will make a sauce, or may be used as a stock for a fish soup.

For frying, fish requires the same preparation as for boiling, being afterwards dipped in butter or egg and bread crumbs. The pan should be half full of boiling fat and the fish let down on a wire strainer or basket previously heated.

For broiling, fish should be washed and carefully dried, rubbed over with a lemon and then floured. The bars of the gridiron should be hot and well buttered before the fish is placed on them.—Portland Transcript.

To Win the Children.

"No subject could be of more vital importance in the home and to us as mothers than home influence," says Bertha Wood Larrabee, in the Mothers' Journal. The mother who has won and knows how to keep the confidence of her children has learned one of the most precious lessons of motherhood. It is one of the most natural things in the world for a child to trust and confide in its mother, and unless some barrier blocks the way, a child will always naturally and voluntarily make a confident of its mother.

"The mother who begins with her children by allowing them,—not teaching them, but just simply allowing them,—of their own free will, to confide in her has a hold on her children that she will never lose. In order to keep the confidence of her children let every mother prove herself worthy of confidence. Let her life be such that the child, even the baby, who learns sooner than we think, may see nothing but what is pure and tender. Let him always find her full of sympathy and ready to listen to the childish stories. The mother who does this will know all that transpires in her child's life, not only when he is with her, but when he is out with other children; for the child mind will be so anxious that dear mamma shall know all that has happened that it will tell all with an innocence and trust that comes only with intimacy.

"When children return from their play, give them an opportunity to tell what they have been doing, and many a story of wrong innocently done will be as innocently related. Here, then, is the mother's opportunity; she may now tell her children of the wrong, show them why it was wrong, and she will still have their confidence; but if instead of receiving her children with loving arms and listening to their childish stories she has, perhaps rather harshly, told them to keep quiet, and not come where she was with their muddy boots, she has lost her best opportunity to know of the wrong that has been done; or if, upon hearing of that wrong, she has scolded them for their childish mistake she has lost their confidence, and the evil once committed will be more easily repeated, and when repeated will be concealed, and the second step downward has been taken."

A New Way to Mix Cake.

Miss Mary Kimmerly, writing in "What to Eat," decries the old system of mixing the ingredients of a cake, i. e., creaming the butter and sugar together, beating the yolks and whites separately, and then baking slowly. Young America declares this to be a waste of time, and says: I have had just as good results when less than one-half the time was used. First, make such a fire as will heat the oven quickly; every cook understands the kind of fire her particular range requires. Now put all your materials together into your mixing bowl before you begin beating or stirring at all; butter, eggs, sugar, milk, baking powder, flavoring and flour, then begin stirring, and continue steadily until the whole is a smooth batter; butter your baking pans, and put in the batter and bake as quickly as possible without scorching. If you are sceptical about this method, just try a couple of simple recipes at first and see how much less time and trouble is required to do the work, and the result is quite as satisfactory. I have never tried making angel food in this way, but believe it can be done just as well as other kinds of sponge cake, and I know by my own experience that excellent sponge cake can be made in this way.

Try some plain cookies that the children or even dyspeptics can eat with no bad results. One cup of sugar, one-half cup sweet milk, one egg, one teaspoon baking powder, flavor to suit the taste, add two cups of flour, put all together in the mixing bowl and stir until all is a smooth mass, then add enough more flour to roll out easily, and bake in quick oven.

White Cake—Whites of four eggs, one cup of sugar, one-half cup of sweet milk, one-half cup of butter, one-half cup of corn starch, one and one-half cups of flour, two teaspoonfuls of baking powder, flavor to suit taste; put all ingredients together and stir briskly until it is a smooth batter, and bake in a quick oven.

Plain Sponge Cake—Three eggs, one cup of sugar, three tablespoonfuls of sweet milk, one cup of flour, one teaspoonful of baking powder, flavor, and bake in loaf, or sheet, and spread with jelly, and roll. In cool weather the butter should be softened, as it mixes more readily, and the quicker a cake is ready for the oven the better the result, provided, however, the oven is properly heated.

Small Economies.

For some time it was quite a puzzle to me to know what to do with bits of dry bread which contained molasses, Graham especially; but I find that they make delicious griddle cakes, says Mrs. Lincoln, in the American Kitchen Magazine.

Soak the crumbs in milk just beginning to turn until it is loppered, stir, mash and rub through a sieve—I use a vegetable masher—then add entire wheat flour, sugar, eggs and soda as needed. I have no definite rule, so can't send it.

I noticed some months ago some correspondents saying that brown bread did not warm over nicely, which quite surprised me. I will give my method for warming up breads of all kinds, most of which are very nice this way, though some few, as the more delicate muffins, are hardly improved.

Dip the things to be warmed quickly into water and put on a pan in a hot oven, turn once or twice while heating and let them heat thoroughly; serve hot.

A whole or half a loaf of bread can be freshened by this method and will taste almost like new bread, while having a delicious crispness to the crust and not being injurious as new bread.

One more item and I am done. In my little family I occasionally have had a nice piece of rare steak left which it seemed a pity to put into any warmed-up dishes, and yet which was not quite nice when reheated in the spider or broiler. Now I take pains to leave it after the meal covered with the gravy and protected from the air so that it will not dry. I also put it on a plate which can be set in the oven. When ready to serve I put it closely covered into the oven for just long enough to heat through, when it will take a keen taste to know it from fresh cooked steak. The secret lies in not leaving it one minute too long and not allowing the outside surfaces to become dried.

A Surgical Discovery.

"German surgeons made the discovery," says the Hartford Times, "that the delicate membrane that lines the inside of an egg shell will answer as well as bits of skin from a human being to start healing over by granulation in open wounds which will not otherwise heal. The discovery was used, for the first time in this country, on a patient in the Seney Hospital in Brooklyn, and it proves to be a successful trial. The patient leaves the hospital today, and resumes his customary work, a well man. . . . Surgeons have long known that healing by granulations requires, in a weak patient, some point (or points) around which the granulations can cluster and grow. For this purpose they have had to rely on bits of human skin, taken from some person who is willing, for love or money, to submit to the painful process of having these bits cut out. In this case, the patient's wife, his nephew and a young man in his employ all offered to furnish the required cuticle. But luckily one of the surgeons then remembered the German discovery, and getting some fresh eggs, tried the lining membrane of the shell. It proved a successful substitute."

Treating Disease with Light.

Dr. Finsen of Denmark has caught the attention of the entire medical world by his new method of treating certain diseases by means of rays of concentrated light. His investigations are supported by State and municipal aid, and are endorsed by the leading physicians and professors of Copenhagen. The arc lights used in the treatment are forty thousand candle power, about twenty times as strong as the ordinary arc light. Already 350 cases of skin diseases have been successfully treated by Dr. Finsen. This is the first instance in medicine where light has been successfully employed as a curative agency. After a series of experiments, Dr. Finsen has discovered that the blue, violet and the ultra-violet rays, when concentrated, become a powerful therapeutic agent, killing bacteria in the skin of a patient in a few seconds. In order not to burn the skin when operating on a patient, it is necessary to cool the light; this is done by a lens that excludes much of the yellow, red and ultra rays that are heating but have no bactericidal qualities. In treating skin difficulties, sunlight is employed as often as possible, otherwise the medium is an electric arc lamp. Dr. Finsen's method is considered as successful for scarlet fever and smallpox as in skin diseases.—The Ledger Monthly.

Domestic Hints.

BREAKFAST DISH.

Finnan haddie for a breakfast dish may be broiled or boiled. If it is boiled, not more than eight minutes is required for cooking it. In either case, when it is done it should be brushed with melted butter and seasoned with salt and pepper.

FISH CUTLETS.

Make a panada of one cup of milk, one tablespoonful of butter, three tablespoonfuls of flour and one teaspoonful of salt. Cream the butter and flour. Heat the milk in a double boiler and add the butter and flour. Cook until thick, stirring constantly until it is smooth. Add the salt. Chop fine one can of salmon and add to the mixture. When it is very cold form into croquettes, flatten slightly and roll them in beaten egg and cracker crumbs. Fry them in deep fat. Serve hot with sauce tartare, which is a simple mayonnaise dressing, to which has been added chopped pickles and olives.

POACHED EGGS SERVED ON FISH CAKES.

Boil some potatoes, mash, then beat until light; season with salt, pepper, two tablespoonfuls of butter, one egg, beaten, or a little rich cream, to each pint of potatoes. Beat thoroughly with a perforated wooden spoon. Add an equal quantity of cold cooked fish, flaked, two rounded tablespoonfuls of egg sauce, or a little butter. When thoroughly mixed shape into flat cakes. Fry nicely some slices of smoked shoulder and remove to soft paper to drain, first on one side, and then on the other. Saute the fish cakes in the hot fat in which the meat was cooked; place a well-poached egg on top of each cake, with the small pieces or strips of shoulder between and parsley in the centre.

ROMAN PIE.

Cut up cold chicken and to each coffee cup of chicken use two ounces of previously cooked vermicelli, two ounces of grated Parmesan cheese, a teaspoonful of finely minced shallot and parsley, a saltspoon of salt, and less than a half saltspoon of good thick gravy. The ingredients should be put in a buttered pudding dish, lined with nice pastry and some broken up vermicelli, then pack in the rest of the material and cover with pastry, and bake; serve with brown gravy.

DOUGHNUTS.

Rub a teaspoon of butter into a generous cup of sugar, add two unbeaten eggs and stir thoroughly; add one scant cup of milk. Mix four level teaspoons of baking powder in two cups of sifted flour, and stir into the mixture. Then add more flour till soft as can be rolled out, one-third inch thick. Cut in rings and fry in clean, hot fat. Test the fat by dropping in a piece of the dough, which should rise at once to the top with a good deal of ebullition and begin to brown at once. Turn only once.

PLAIN SPONGE CAKE.

Beat yolks three eggs, add one and one-half cups granulated sugar, one teaspoon lemon extract or one tablespoon juice, and one-half cup water. Add two level teaspoons baking powder mixed with two cups pastry flour, and the whites beaten stiff and beat thoroughly. Bake in long, shallow pan, or in round pans if for cream cake or pies.

Hints to Housekeepers.

To skim a sauce the expert cook will draw the saucepan to the side of the fire to stop the boiling, and add a teaspoonful of cold water, which promptly causes the grease to rise.

A good way is never to apply a liquid odor directly to an article of clothing, but keep sachet bags everywhere in the wardrobe. By this means every article of clothing has a faint aroma, too subtle to be defined. Some women even make tiny sachets to sew on the sleeves at the underarm seam.

Women who are careful of their leather footwear have the linings of their fine shoes renewed as regularly as they would the linings of jackets that have become mussy. Any high-class shoemaker includes this relining in the work of his repairing department.

For rhubarb jelly the stalks are cut and stewed gently until tender. To a quart of the rhubarb a pint of sugar and a little more than a half-box of gelatine is allowed. Soak the gelatine in a little cold water and add to the rhubarb while the latter is warm, rubbing the mixture through a sieve, pour into a mould and serve with whipped cream. While the stalks are young and tender, as they are at present, the rhubarb need not be peeled.

A few drops of alcohol mixed with a little olive oil in the proportion of two and one-half parts of oil to a half part of alcohol is a better mixture with which to rub polished tables than the plain oil. The alcohol cuts and takes off any grease, dust or trifling stain.

For a tasty, delicate relish that may be quickly prepared nothing is nicer than sardines on toast. Drain off the oil, scrape off the skin and split them. Lay on a broiler upon a sheet of writing paper. When they are browned put them on strips of toast which have been buttered, and squeeze over them a few drops of lemon juice.

An excellent substitute for plum pudding is made as follows: One cupful of raisins, two cupfuls of bread crumbs, one pint of milk, butter the size of an egg, one egg, teaspoonful of cinnamon, one-half cup of molasses. Place in a baking dish and bake in a slow oven for about an hour, or until firm. Serve hot with the usual plum-pudding sauce.

A cupful of maple sugar grated or cut in bits stirred into an ordinary quick biscuit dough will give a novel sweet cake. The biscuits are then cut as usual and baked quickly; the sugar melts during the cooking and glazes the outside.

The Fashions.

*** A satin ribbon worn around the neck and tied in a trim bow at the throat should have the two ends long and tucked in at the belt.

*** The traditional shawl which can be drawn through a wedding ring is as nothing to the pretty hosiery of the pretty girl this year. The lisle gauze stockings are not much more than a mist or a cobweb, they are so delicate and transparent. To make them to some degree practical, they are double at the foot and heel. They are inexpressibly dainty and delicate.

*** Fine close-mesh veils are not so becoming to some, because they darken the skin. Plain Brussels net and tulle are in this category. The new double veils, black over white, soften the face, and are becoming to women of middle age. The outer veil may be any sort of mesh, but sheer white illusion always forms the background.

*** A charming material in chiffon which is used to make soft little jackets for gowns, and which is altogether charming in either black or delicate colors, has real flowers—that is to say, the real flowers of the milliner—appliqued upon it, the foundation of the flower appliqued to the chiffon, while the remainder stands up from it, and has the effect of natural flowers strewn over the material. With black flowers on a white ground it is stylish, and with pink or delicate colors it is beautiful. The innumerable combinations that can be made with a material like this can be varied indefinitely. It comes in narrow widths, and a very little can be used to advantage.

*** The use of cloth on silk is shown in a dark figured blue foulard gown, which has a fancy yoke, finished at the lower edge with tan cloth in the effect of a falling collar, while the opening of the gown below at the side has three little straps across of the tan cloth.

*** Sailor hats for boys come, many of them, in coarse straws, with wide curled rims. Smaller hats are in finer straws, but the rims are all curled.

*** Cluny lace is used for many kinds of gowns this year, and is charming with all.

*** A pretty pale blue parasol has star-shaped figures of heavy lace appliqued over it at intervals, and a narrow scroll design of the same lace around the edge. A red parasol has an all-red wood handle to match, with narrow bands of gold around it at intervals. A parasol with a dark wood handle has narrow bands of silver set in to it at intervals.

*** Hats for little girls are of shirred lawn, mull and silk with or without plaited frills on the brim, and are made of fine transparent satin straw forming the brim in bias double folds. Again, there are hats with high crowns of lace straw threaded with black velvet ribbon and a brim of silk and mull plaitings. Large bows of the new soft, wide, taffeta ribbons with a bunch of flowers trim some of the straw-brimmed hats, and then there are all sorts and kinds of shirred sunbonnets.

*** Foulards and India silks in small all-over designs and polka dots are made up into summer gowns for girls, and some of the skirts are shirred on three cords around the hips. Tunic overdresses with a scalloped or pointed finish around the edge, trimmed with lace or rows of velvet ribbon falling over ruffles around the hem, are another style of skirt. Party dresses for young girls are made of point d'esprit and organdie finely tucked up and down in groups with insertions between and around in tucks which nearly meet and quite cover the upper portion. Guimpe necks are the ruling style for these gowns, with the full simple bodice below and lace-edged frills around the shoulders.

*** A pretty way in which black velvet is put around the waist of one white gown is worth repeating. There are three rows of half-inch wide velvet. At the front of the waist they are close together, giving the effect of one piece of inch-and-a-half-wide velvet. But from there they gradually separate until in the middle of the back they are their own width apart and are fastened each with a tiny black bow. It gives a pretty little corselet effect and is exceedingly simple.

*** Shirrings, side plaitings, tucks, puffings with rows of insertion between narrow frills lapping each other, and wider lace insertions with alternating clusters of tucks or used in perpendicular or horizontal rows, are all much in evidence on the latest models for summer toilettes of India muslin, French batiste, organdie, barege, grenadine and etamine.

*** Many fashionable dressmakers prefer gauging or gathering the skirt rather than having wide plaits, which, despite the broad box plaits at the back of the gown, give but little more liberty to the figure than the out-of-date habit styles. The gauged skirt is novel in appearance and possesses an elasticity over the hips which is most desirable.

The World Beautiful.

BY LILIAN WHITING.

"Whither goes the soul when it at death departs from the body? What kind of body shall the glorified body be? The soul and spirit of Christ, what are they? And are they the same as ours? What and where is Paradise? . . . Do not let any sophistry teach that thy God is far away from these as the stars are. God is in thee. Power, might, majesty, heaven, paradise, elements, stars, the whole earth—is thine. . . . When thou prayest the Holy Ghost shall meet thee and help thee, and thy soul shall be the whole of heaven within thee. . . . In the name and in the strength of God love all men. Love thy neighbor as thyself, and do to thy neighbor as thou doest to thyself. And do it now, for now is the accepted time, and now is the day of salvation."—Jacob Behmen.

"And he trembling and astonished said, Lord, what will thou have me to do? And the Lord said unto him, Arise and go into the city, and it shall be told thee what thou must do.

"And the men which journeyed with him stood speechless, hearing a voice, but seeing no man."—The Acts, ix., 6 7.

Again the radiant Easter, the sublimest festival of the Christian Church, suggests to every heart the questions formulated by the seer and mystic Jacob Behmen, in the words: "Whither goes the soul when it at death departs from the body? What kind of body shall the glorified body be?" Paul, who had the wonderful experience when on the road to Damascus, "when suddenly there shined about him a light from heaven," when he fell to the earth and heard a voice saying, "Why persecutest thou me?" when he, "trembling and astonished," asked, "Lord, what will thou have me to do?" and received the answer as embodied in the passage quoted above. Paul, who passed through all these thrilling and revolutionizing experiences, tells us as the result of all that he had learned that "there is a natural body and there is a spiritual body." Is not the question of Behmen answered in the serious and logical statements of Paul as given in the fifteenth chapter of First Corinthians? Our church burial service incorporates this chapter as the very foundation of the hope, the consolation and the faith of the Christian. There are celestial bodies, Paul tells us, and bodies terrestrial; "but the glory of the celestial is one and of the terrestrial another."

These are very simple and plain statements; very luminous and authoritative when accepted in their aspect of absolute truth and simplicity, rather than clouded and befogged by metaphysical and theological speculation. There are statements that the latest results of scientific thought and psychic research verify. The question "Can man by searching find out God?" presents itself to us in modern days under a new aspect. Can man by searching find out the secrets of the universe? Can he learn actual laws that govern and determine all the movements and relations of the solar systems? Science replies in the affirmative. Within the reign of Queen Victoria, the composition of other planets, the means whereby the heavenly bodies are weighed and measured were unknown to astronomers; today, they are familiar to sidereal astronomy. "Can man by searching find out God?" He can achieve an increasingly larger knowledge of the laws which God has made. The horizon line of ignorance recedes as man advances. Science, itself, is a means to knowledge of the diviner life. The law of evolution operates on the spiritual as well as on the physical plane, and humanity as it advances grows more divine and approaches into a more intimate perception of those supreme qualities which in their highest and holiest manifestation are felt in the Divine Being.

"Whither goes the soul when it departs from the body?" It is a most timely question for this Easter morning. May not the first answer be in the words of Paul, "There is a natural body and there is a spiritual body,"—not there will be a spiritual body, but there is one, a spiritual or psychic body co-existent with the physical body; interpenetrated with it for a season; withdrawn from it at the conclusion of a certain round of disciplinary experiences, but a body as definite as that which we see and one that Swedenborg well calls the *substantial* body, in contrast to the physical, which is daily changing and vanishing, and which is, at best, but a transitory appearance. The soul, the divine spark, the ego, is enshrined in this subtle body; this etheric or spiritual body. Death is its release from the physical form and physical conditions into the higher set of conditions which are what Jesus so luminously characterized as the life more abundant. Yet a still deeper truth is involved here. These higher conditions are not, necessarily, withheld from man until the event of death, nor are they, necessarily, opened to him by that event. Spiritual conditions are commanded and controlled by the degree of spirituality man has achieved. "Thoughts let us into realities," says Emerson. Spirituality of thought and purpose admit us to spiritual realities. Let one cast himself with utter abandon, with reverent faith into the divine keeping. Let him but feel, "Lord, what wilt Thou have me to do," and it shall be shown him what to do. He shall so develop his psychic faculties that spiritual lumination shall be his. Paul's experience and that of his companions in hearing a voice and seeing no man, is simply the experience repeated to many in the present day. We live and move and have our being in the midst of unseen companions, whose words we may hear, whose guidance and aid we may constantly receive, for, "are they not all ministering spirits," sent forth by God? The law of mutual helpfulness is the divine law. To so live as to be in instant, swift response to the diviner realm is to receive of this guidance perpetually. The spiritual body is formed of magnetism and electricity. It is felt when it can no more be seen than the electric current can be seen. But its reality is as demonstrable as the reality of wireless telegraphy. Withdrawing from the physical body the etheric body is in the ethereal conditions in space; in conditions where every force is more potent, where every energy is more sensitive, more responsive, more in tune with the nobler energy. This, then, may be one lesson to be drawn from the Easter season.—Boston Budget.

GEMS OF THOUGHT.

....If there enter your soul a sense of peace which makes you forget all that is behind you, all that is mournful and confused in your past, that is God.—De Bavignan.

....Anything which makes religion its second object makes religion no object. God will put up with a great many things in the human heart, but there is one thing he will not put up with in it—a second place. He who offers God a second place offers him no place.—Ruskin.

....Fidelity in trifles and an earnest seeking to please God in little matters is a test of real devotion. Little things come daily, hourly, within our reach, and they are not less calculated to set forward our growth in holiness than are the great occasions that occur but rarely.—Jean Nicolas Grou.

....Thou Brightness of eternal glory, Thou Comfort of the pilgrim soul, with Thee is my tongue without voice, and my very silence speaketh unto Thee. Come, oh, come! for without Thee I shall have no joyful day or hour; for Thou art my joy, and without Thee my table is empty. Praise and glory be unto Thee; let my mouth, my soul, and all creatures together praise and bless Thee. Amen.—Thomas a Kempis.

...."Is it not a fact that this day, this hour, working men are wearing themselves out in all parts of the earth for us? Coolies are at work preparing our tea in the fields of China; fellaheen in the Delta, negroes on Southern plantations are toiling from sunrise to sunset to provide us with cotton; farmers in the West are, with the sweat of their brows, watering the broad prairies that give us the staff of life; factory hands in Great Britain and Germany and France, as well as here at home, are leading cheerless, steam-driven lives to supply us with luxuries; miners in Pennsylvania and Colorado and Cornwall are robbed of the light of day that we may have comfort or pleasure. These are all laboring for us, what are we doing for them?"—Ernest Howard Crosby.

....The minister whose sermons are made up merely of flowers of rhetoric, sprigs of quotation, sweet fancy and perfumed commonplaces is, consciously or unconsciously, posing in the pulpit. His literary oriolite russes, sweet froth on a spongy, pulpy base, never helped a human soul; they give neither strength nor inspiration. If the mind and heart of the preacher were really thrilled with the greatness and simplicity of religion he would, week by week, apply the ringing truths of his faith to the vital problem of daily living. The test of a strong, simple sermon is results, not the Sunday praise of his auditors, but their bettered lives during the week. People who pray on their knees on Sunday and prey on their neighbors on Monday need simplicity in their faith.—William George Jordan.

POETRY.

(Original).

AN EASTER LESSON.

Where seeming death had claimed the sod,
I saw the snowdrop lift its cup;
And knew that soon the hand of God
Would raise new beauty up!

And soon the crocus flamed anew,
And soon the verdure clad the scene,
While in the vale the violet's hue
Was mingled with the green!

O God, I thought, no death was here!
Life was but slumbering 'neath the snows,
Till Springtime's Angel should appear,
To wake the dreaming rose!

So teachest thou thy lesson deep,
That love is life, and life is love,
While man but passes into death's sleep
Unto new realms above!

ARTHUR E. LOCKE,

Brighton, Mass.

THREE O'CLOCK IN THE MORNING.

There is a time of morning
When the jubilant new-born day
And the opal tints of approaching dawn
As yet seem far away.
In the eastern sky is movement,
No glow, but impending change.
The house is filled with echoes,
Familiar rooms look strange.
Slip back the bolts and leave them,
Steal out beneath the sky,
Stand alone in an unknown world
Of awful purity.

Stand alone with folded hands,
Wait for the gift of wings;
Wait to be lifted higher,
Nearer the heart of things!

The heavens are clear and moonlit,
Though the moon is on the wane;
The wind, that wailed throughout the night,
Drops with a sigh of pain.
A vague alarm is creeping
Over the fields and lawn;
Time pauses—night is over,
And yet it is not dawn.
Away down in the pastures
The cattle turn and moan;
All living things are troubled
With a sense of the unknown.

For they with eyes may see now,
And they who question know.
Make the most of the magic hour:
The East begins to glow!

The East is all in tumult,
The charmed hour is past;
For, breaking up the quiet skies,
The day appears at last.
—Olive Molesworth, in Chambers' Journal.

WOMAN'S VOCATIONS.

With Woman's nimble fingers
Awake life's beauty everywhere:
Things small and unregarded
Beneath thy touch shall change to fair.

With Woman's tender insight
Unspoken sorrow understand;
The watcher's aching forehead
Shall yield unto thy cooling hand.

With Woman's noble purity
Be as the snow-white lilies are;
Their glowing heart shall beckon
And be the wanderer's guiding star.

With Woman's strength eternal,
Thy life, for others freely given,
Shall shine afar, transluscent,
Clear as the crystal gate of Heaven.
—Carmen Sylva, in The North American Review.

EASTER KISS.

My friend, would know? Sweet Easter melody
Once full impressed upon the hearts of men,
Will be re-echoed by the heart again
To sanctify throughout the years to be.
The song of Christ's great love for you and me
Hath subtle power the heart to warm and cheer—
Let carols sweetly swell that all may hear—
"Peace on earth, good will," and charity.
Then lift the voice in chiming chorus sweet,
And tell the old glad story o'er and o'er—
Sing tender songs of love and sympathy
And helpfulness, the name of Jesus mete,
And worship Him, in truth forevermore,
Who kissed to smiles the plains of Galilee.
—Lyman W. Denton, in What to Eat.

SONNET.

When from the narrow round that hems me in
My chafing spirit rages to get free,
Scorning just laws for natural liberty,
And, haughty grown, a wider sphere would win,
I do bethink me what my lot hath been,
How small vexations, like a wasting sea,
Do fret my temper to extremity,
And leave me spent where I would fain begin.
I say, as Heaven adjusts our strength and weight,
Nor greater burden give than we can bear,
But each a spirit equal to his fate,
So my poor task-work, done with reverent care,
More hallowed is than aims beyond my state.
Lord, keep me constant where my duties are,
—Selected.

It has often been said of the medical tribe
That they seldom will swallow the stuff they prescribe;
Yet though they may not think their julap is nice,
They will profit derive from their own good advice.
—Chicago Record.

Kruger owes big cash to England;
Ah, perhaps this nerves his arm.
Who can face a fierce collector
And not thirst to do him harm?
—Chicago News.

Nay, do not seek me when proud fame
On dizzy heights has carved your name;
Come when life's glamour seems to lag
Then you won't be so full of brag.
—Indianapolis Journal.

"Our last month's gas bill was just frightful,"
Said Mary to her beau.
The young man rose with smile delightful,
And turned the gas down low.
—Baltimore American.

We see her at the telephone,
When her stormy frown;
She calls her husband up
And then she calls him down.
—Chicago Daily News.

Compensations in nature,
Everywhere you find them—
If a woman is far ahead of the times,
Her gowns are as far behind them.
—Detroit Journal.

A young man who loved a soubrette,
Told her fondly, with eyes that were wette,
How for her he'd win fame
And glory and name;
Then she asked him, "And what will I gette!"
—Indianapolis Press.

"Oh, what a tangled web we weave
When first we practise to deceive!"
And ere we get expert, perhaps,
Our memories begin to lapse.
—Indianapolis Journal.

The doer's the man behind the rocks,
Which makes it hard to find him—
But the Briton wins, for he's the man
Who has the rocks behind him.

O robin once again you're here—
'Mid snow and ice to bring us cheer;
You could not chirp with zest sublime
Had you to live North all the time.
—Chicago Record.

Put your heart into the work
When a business you begin,
But you'd better think awhile
E're you put your money in.
—Chicago Daily News.

Maybury's Repentance.

"I don't pay much attention to what doctors say," he remarked in his importantly jovial way. He was a tall, dogmatic, well-dressed man of thirty something. "Point of fact, I've never had occasion to see one before, but—"

"You are fortunate, Mr. Maybury. Won't you sit down?"

"No," he replied, "I won't. One doesn't get on in life by sitting down. My motto is to keep going."

"Most of us have to pull up now and again. The human frame—"

"Look here," remarked the city man truculently, "you're not going to frighten me. Although I've had little to do with you medical men, I know there are two sets of you; the optimists and the pessimists. Some of you are too sanguine, and others are not sanguine enough, but none of you tell the precise truth."

"A medical man," said the doctor, trying to preserve his temper, "has to use discretion. A medical man who hurted out the actual truth might well be doing his patient a good deal of harm. You must allow us, my dear sir, to know our own business best."

"That's just what I shall not do!" cried Maybury with vehemence. "There's more of humbug among you doctors than—than—"

"Than on the Stock Exchange?"

"Than in any other profession. Those of you who are not sheer quacks—"

"Really, Mr. Maybury," said the doctor, offended, "you must allow me to say—"

"Are you a specialist in this trifling complaint that I am suffering from?"

"No," replied the doctor, shortly, "I'm not."

"Then give me," said Maybury, "a note to the man at the top of the tree, and I'll go on there in my cab like a shot."

The doctor was sorry to lose sight so quickly of an important client, but Mr. Maybury's aggressive manner had not pleased him, and even doctors, careful as they are to cloak the fact, have their sensitive moments. He scribbled a note. Mr. Maybury laid on the table an admirable fee, and taking the letter ran out to his cab.

"Two, five, two Harley street!" he shouted.

"Right you are, sir," said the cabman. "Winder up or down?"

"Never mind the window. Put your horse along sharp."

"Gent," muttered the cabman to himself, "seems to be in a bit of a hurry."

Indeed, this was the usual manner of Arthur Maybury. When the cab stopped at one of the large houses in Harley street, which bore, like all its neighbors, a square brass plate on the open door, he went hastily through the hall, and without going into the waiting room, opened a side door. A stout, florid man was seated at the table reading the advertisements in the British Medical Journal. Mr. Maybury banged his silk hat down on the table and shook hands.

"My name's Maybury," he said, delivering the note. "Here's my card. A meeting of directors is waiting for me at Cannon-street Hotel; I can only spare five minutes. Now, just run over me Dr. Jeyeson, as sharp as ever you can, and give me a prescription."

"First give me your symptoms."

Mr. Maybury described them. A feeling of depression in the evenings; slight insomnia; absence of appetite. The florid man eyed him seriously and held his wrist for a few moments.

"I may as well tell you," went on Maybury, with a burst of frankness, "that I am to be married in a few months to a very charming girl; dare say you have seen the announcement in the papers. Miss Tearle, daughter of that Irishman who lost all his money in tin—"

"Mr. Maybury!" The stout, florid man came round and stood with his back to the fireplace. "I have an important announcement to make to you. Your engagement must be cancelled."

"Oh, no," said Maybury, with a gesture of protest. "That be hanged for a tale. She'd go and marry some one else, and they wouldn't have sixpence between them. I couldn't allow her to endure that fate, Dr. Jeyeson."

"I have nothing to do with the lady," he said with gravity. "I am only concerned with you. You are suffering from a rare complaint, known to us medical men as—" Maybury did not catch the phrase. "It is my duty to tell you, sir, that," he coughed and lowered his voice, "that you have but a few days to live."

Arthur Maybury half fell, half sat on the nearest chair. His face went very white; his lips moved, but no sound came.

"Serious news to tell a man, I know, but it's best that you should know the truth. What I recommend is that you should go to the Riviera at once." Maybury ejaculated something in a whisper. "Ah, it's of no use damning the Riviera. That won't help you. You get away by tonight's mail without saying a word about your condition to anybody, and take the few remaining days of your life as quietly and as calmly as you can. Be sure not to talk of it; that will only increase the excitement and fasten the head—I mean to say hasten the end."

"Are you—are you sure of this, Dr. Jeyeson," stammered Maybury.

"I am not in the habit of making mistakes."

"What is the time now?"

"The hour is now two o'clock. You have seven hours in which to make your arrangements."

"And can't you give me a prescription or anything?"

"My dear sir, pray be reasonable! Yours is no case for prescription."

There was a pause. Maybury looked stupidly at a portrait of Sir James Paget on the walls without seeing it; his adviser drummed at the mantelpiece impatiently.

"What—what is your fee, Dr. Jeyeson? Shall I give your man a check?"

"Twenty guineas, if you please. Perhaps you will leave it there on the table. Either gold or notes."

With trembling hand Mr. Maybury counted out the amount.

"Twenty-one sovereigns," he said thickly. "Rather a lot of money to pay for being told that one's not going to live a week isn't it?"

"I'll see you to the door myself, Mr. Maybury. And, above all, don't speak of this to a soul. Make it, I beg, your own secret."

Harley street is really a very straight thoroughfare, but to Maybury, walking down unsteadily toward Cavendish square, it seemed full of odd convolutions. More than once he had to stop and grip at railings in order to recover his self possession; passers by stared at him curiously, and a servant girl said something so very amusing about his manner to a servant next door that the servant next door nearly slipped down the area steps. In Cavendish square he became himself. He was a man used to obstacles; his practice in overcoming them came to to his aid now. First he must go somewhere and think. His club? No; there he would find men whom he knew. His flat in Ashley Gardens? Yes. He would be alone there. Much to think about and much to do before he left Charing Cross that evening. He would, as the Harley-street man had advised him, keep his own company; there was no one in the world with whom he would care to share the secret. He feared that if he were to tell some men of his acquaintance they would have difficulty in repressing signs of satisfaction.

"Wish now," he said desolately, "that I had made one or two friends."

A familiar tap on the shoulder from a walking stick made him start.

"My dear boy," said Miss Tearle's father, "what on earth do you mean by loafing about Bond street at this hour of the day? I thought you were always up to your eyes in business. You're taking a day off, maybe?"

"Yes," he said shortly.

"I'm right then!" exclaimed Miss Tearle's father with surprise. It was, in fact, not often that he was correct. "What wonderful perception on my part! I was telling me daughter only last night that I retained all me powers of insight. But, tell me now, is there anything going that you can recommend to me for an investment?"

"My dear Tearle," said Maybury with impatience, "don't bother me. Besides, you know very well that you have no money to invest."

"I am free to confess," acknowledged Miss Tearle's father, "that for the moment I had overlooked that fact. Is there any message for me dear Margaret? How that girl adores you, me dear Maybury!"

"Are you sure that that is so?"

"Well," said the other, hedging, "she adores you as much as can be expected under the circumstances. I'll be plain with you, Maybury. She's never quite forgotten her young cousin who died out in West Africa, and that's the truth. But after all," he went on indulgently "that's nothing. It will all pass off. You're a man of the world, Maybury."

"Temporarily."

"Ah!" said Miss Tearle's father. "We'll none of us live forever, unfortunately. And that reminds me. Have you such a thing as a five-pound note, me boy, about you that you could conveniently spare for twenty-four hours? I'm infinitely obliged to you."

"Tearle!"

"Sir?" said the grateful old gentleman.

"With reference to Margaret." Maybury hesitated for a moment. The march of four young women across the pavement from a brougham to a shop separated them for a few moments. "I want to ask you something. Do you think that she would be sorry if—if anything serious were to happen to me?"

"Me boy! You're not the kind of man that anything serious happens to. You're too knowing for that."

"I want an answer to my question."

"Maybury," said Mr. Tearle, placing the note carefully in his pocketbook, as though to hint that it would be disbursed with great caution, "I'll tell you the truth. Time was when she became engaged to you at my particular request, and there was no great affection on her side. But I'm speaking the honest truth when I tell you that she is now positively fond of you."

"Ah!"

"To be brutally frank," remarked the old gentleman, "let me tell you that you have some good qualities below the surface, but that it takes time to find them. For my part, I consider myself deeply indebted to you."

"I suppose you are," said Maybury. "Goodby."

"I hate the word goodby," said the effusive old Irishman. "Let us borrow the phrase of our lively neighbors and say *au revoir*."

"Goodby," repeated the other steadily.

It was a great relief to him when the lift had taken him up to his floor in Ashley Gardens and he was able to lock the dining-room door upon himself. The two matronly servants did not hear him arrive, and they went on in high-pitched tones with a quarrel which was not really a quarrel, but a kind of sham debate, probably started to chase monotony. The elder of the two had been a servant with his parents; her voice made him think of his mother. One of Maybury's best traits, and one that he never revealed to the world, was his affection for the memory of his mother; for the first time since her death he thought of the possibility of meeting her again.

"But she was a good woman," he said.

Was it too late to make some reparation for his acts of the last few years? The clock on the mantelpiece struck the hour and reminded him that there were no moments to waste. He went to the writing desk in the room—there was a writing desk in every room in the flat—and unlocked the stationery stand. He opened his checkbook and laid it on the ledge, and for half an hour he wrote swiftly several letters. It was not possible to make amends to all the people to whom he had acted unfairly, but there were some who, by reason of their association with him, were now in distressed circumstances. To these he wrote letters which had for company a check.

"There seems," he said thoughtfully, after the half hour's work, "a good deal to clear up."

To Margaret Tearle he wrote a long, affectionate letter, the composition of which cost him some trouble; when he had finished it he thought for a moment and then tore it into many pieces, because he felt that it would give pain. He substituted a friendly little note, simply announcing his departure. Maybury had never made his will, because it had always seemed an absurdly premature thing to do. Now he took a sheet of paper and thought.

The elder servant, answering the ring, appeared in the dining room. Her master was reading over the sheet of paper which he had written out, and he did not speak to her at once.

"Didn't know you were in, sir. Letters to post, sir? I'll send them down by the lift boy at once. Would you like dinner a little earlier?"

"Pack my bag, Martha, please. I'm going away to the south of France."

"How long, sir?" inquired the middle-aged servant. "Excuse my asking."

"I don't know when I shall be back," he said, wearily. "And Martha!"

"Sir?"

"Oblige me by witnessing my signature here, and call the other maid in to do the same. I have just been making my will."

He endorsed the document "Will and Testament of Arthur Maybury," and placed it in a corner of the desk. He went again to look at himself in the mirror, and felt gratified to find himself looking sane and normal; a tinge of color had returned to his face. He took the photograph of Margaret Tearle from an expensive frame and placed it carefully in his pocket. Then he looked through the square revolving bookcase for a volume which it seemed was not there, for he had to ring and disturb Martha in her work of packing his portmanteau.

"A Common Prayer Book!" echoed that astonished woman. "Certainly, sir, I can lend you one."

He found the service that he desired to read at the end of the collection. It occurred to him that it was a piece of careful editing to begin with the Public Baptism of Infants, and to place the service for Burial of the Dead toward the end. He read the latter softly to himself, and tears came very near to his eyes now and again for the words gave him memories. He had heard them read several times; it seemed queer that he had never till now thought of the occasion when they would be read over him.

"Your bag, sir," said Martha, bringing in the portmanteau, "and I don't think I've forgotten anything."

"Martha," he said.

"Yes, sir."

The middle-aged woman helped him with his coat.

"I am not very well, and I'm going away to—going away for the benefit of my health."

"Master Arthur! It's nothing serious, I hope?"

"I'm afraid I've been rather—rather a selfish master during the last few years. If at any time I have been harsh in speaking to you, if I have seemed to forget you were an old servant of my dear mother's, I want to ask your pardon."

"No, no, Master Arthur," said the woman, tearful, "not that. You mustn't ask my pardon."

"I should like you to think of me," he said, "as I was when I was a boy, and—" He stopped for there was a choking in his throat. "Ring for a hansom," he said,

"I can tell, sir," said Martha quaintly, "that you're not 'alf well."

He looked around when the servant had gone and said farewell to the room. Opening his portmanteau, he found room for some letter paper and envelopes; there would be time, he hoped, out in the south of France to take further steps to right the wrongs that he had committed. For the first time he recognized the amazing change that the Harley-street man's announcement had made in him; the quiet, thoughtful man, with a great affection in his heart for the world, seemed to have no relationship with the assertive, buoyant man who had left for the city that morning.

"Cab's waiting, sir," said Martha. 'And here's a telegram."

"I won't trouble to open it," he remarked. "It's from my partner, I expect. I can't bother about business any more."

"It might be private, sir."

Only the thought that it might be from Margaret Tearle induced him as he stood in the passage waiting for the lift, to open the envelope. It was not from her.

"Can I see you at your rooms now?

"JEYESON."

He scribbled hurriedly a reply on the back.

"No. Am leaving Charing Cross to-night's mail.

MAYBURY."

"Please send that, Martha," he said. "Goodby."

"Goodby, Master Arthur," said the woman. 'And I do 'ope you'll be back soon."

"Goodby."

He repeated these two words many times as the cab took him past the Abbey and up Parliament street. At Charing Cross there was time to spare, and feeling hungry he went into the hotel. Something to his surprise he found himself able to eat with admirable appetite; a small bottle of white wine added to his content. He felt half inclined to speak to the people who were eating at the next table, and to tell them that he had but six days to live in this world; to tell them that he was facing the certain thing with self possession. One of the party commenced to brag solemnly about an attack of toothache, and Maybury smiled at the want of proportion.

He had taken his ticket, and was at the woolen barriers leading to the Continental platform when he saw a clean-shaven, anxious old gentleman scanning the faces of the passengers. He touched the shoulder of the man who was going through in front of Maybury.

"Excuse me," he said, "is your name Maybury?"

"*Comment?*" asked the man. "*Vous dites?*"

"My name is Maybury."

"Glad to have found you," declared the anxious old man. "My name is Jeyeson, of Harley street."

"I think not," said Maybury. "I saw that gentleman late this afternoon, and you are certainly not he."

"My dear sir," cried the old man sharply, "do you think I don't know who I am?"

"Apparently you do not."

"I beg your pardon," he said apologetically. "I had forgotten. Very natural consequence of a very annoying circumstance. Tell me! You called at Harley street about four o'clock. I found your card there. You had an interview and you paid a fee. How much did you pay?" Maybury with some interest gave the information. "He's a scoundrel!" declared the old man.

"Who?"

"My new man. I was out when you called; if you had gone into the waiting room the page boy would have told you so. I hope he did not give you a prescription?"

"He only told me," stammered Maybury, perplexed, "that I had but six days to live, and that I had better get away from London at once."

"Upon my word!" declared Dr. Jeyeson, "that was clever."

"But—was he wrong, then!"

"Wrong!" cried the concerned old man. "Of course he was wrong—all wrong. It has taken me ever since five o'clock to try to remedy the mischief that he in ten minutes managed to do to my practice. Drive back with me in my brougham."

Later the two sat in the doctor's private room in Harley street. Dr. Jeyeson, smoking a long cigar, had just concluded one of his best stories of an incident at Bart's. His guest was courteously amused, but he seemed to be thinking of other matters.

"And you feel sure that I am all right, doctor?" he asked for the fourth time.

"My dear sir," said Jeyeson emphatically, "you're as sound as a bell. Go slow; marry this charming young woman; settle down. Only thing I'm concerned about is that you will accept my apology for the shock you've had. I hope it hasn't done you any harm."

"Indeed," said Arthur Maybury, "I'm sure has done me good!"—W. Pett Ridge, in the Sphere.

YOUTHS' DEPARTMENT.

EASTER.

What means this little crocus bloom,
Starring so the path and lawn,
Dispelling winter's cold and gloom,
Whose harrying hosts are all withdrawn?

The dandelion's disk of gold
On the croft its stamp has set,
Where shyly gleams—beloved of old—
The lithe, sweet-tinted violet.

Bi ther speeds the prattling brook
On its pathway to the sea;
A world transfigured, where we look,
Brings bloom and song to bush and tree.

So, from the far-off Syrian sky,
Today a spell stirs heart and soul:
Some spirit thrills us from on high,
That darksome death cannot control.

Its meaning marks the purpler dawn,
The sparrow's song its purport tells,
That life from human sense withdrawn
Still in eternal summer dwells.

With wreaths and flowers and choral song,
We hail once more the Easter morn,
Since death shall but to death belong,
And life forever be reborn.
—Joel Benton, in Christian Register.

Spiting Aunt Lucretia.

"A rainy day!"

"Oh, dear, dear!"

"Now we can't go into the woods."

"So mean to have it rain on Saturday!"

Ruth and Archie appeared at the breakfast table with faces as cloudy as the day, and complaints which sounded far worse than the gentle patter of the rain.

"No peace in the house today."

It was Aunt Lucretia who had said this last. It was generally understood in the family that she was always a little better pleased when the children were out of the house than in it. The children especially understood this, and any one who knows young people will easily guess that it did not make them feel more anxious to be good.

"I am sure," said mamma, looking a little worried, "that they will try to be quiet. They will remember that you do not feel well."

Aunt Lucretia shook her head, and looked gloomy. Archie set his lips together with a feeling which mamma knew meant—

"We'll see about that."

After the others had left the breakfast-room, Ruth and Archie stood looking out of a window.

"Mean old thing!" said Archie, below his breath.

"What?" asked Ruth.

"Aunt Lucretia."

"Archie," exclaimed Ruth, in a shocked tone, "I thought you were speaking of one of the boys."

"I wasn't," said Archie. "She is—"

"Don't say it again, Archie," said Ruth sternly.

"Well, I won't. But I mean it all the same. No peace in the house!" Ruth, she'd a great deal rather we were naughty than good!"

"Now, Archie!"

"It's so. Don't you know that, when we're real good, she never takes a bit of notice, and that, when we're bad, she always does? She enjoys it,—just because it gives her a chance to scold."

"I'm—afraid you are right, Archie," admitted Ruth, after a little consideration of the matter.

"Of course, I'm right. Say, Ruth,"—Archie gave a little jump of delight—"let's play a joke on her."

"Oh, mamma wouldn't like it."

"A good joke, I mean. There are good jokes and bad jokes, you know. See here, now; Aunt Lucretia thinks we'll be troublesome all day. She thinks we'll growl and grumble at the rain, and tease for things, and make noises, and everything else that's mean. Now let's begin and be just as good as we can to spite her."

"Oh!" said Ruth, not able to reconcile the goodness with the spite.

"Don't you see? She'd be watching all day to see us behaving like torments, and we'll disappoint her."

Ruth began to smile. There was something pleasing in the idea. Certainly, there could be nothing wrong in trying to do their best.

"Let's! We'll do our Monday lessons the first thing, without anybody telling us. Then I'll cut my week's kindling."

"And, when I dust the sitting room, I'll dust all the corners."

"I won't set Ponto and kitty in a fight."

"And, if there's pudding for dinner instead of pie, we won't say a word."

"We'll keep it up all day."

"We'll be—be—truly virtuous," concluded Ruth, now fully in the spirit of the day's effort, and desiring to express herself strongly.

"If I forget or get tired, you remind me," said Archie. "Just whisper, 'Spite'; and that'll be enough."

The morning's duties done, the two were seated in the large sitting room, Ruth with some fancy work, and Archie reading aloud, mamma looking pleased and tranquil. Presently Aunt Lucretia, looking out of the window, remarked:—

"Well, here's an end of the quiet! I knew it couldn't last long."

Archie's best friend, Herbert, was coming in.

"Say, Archie, come down and play in the creek, can't you? You can put on rubbers and your old coat. 'Tisn't raining much. The water's rushing along like sixty, and we can have a great time building a dam."

Archie sprang up excitedly at the tempting proposal.

"Hurrah! That'll be fun! Mamma, can't I go?"

"I'm afraid not," said mamma. "You must choose a dryer day for building your dam."

Archie burst into a loud remonstrance. Ruth laid her hand on his arm, shaking her head with a meaning glance, which Archie at once understood. The dear little girl did not like to whisper the ugly word.

"Well, Burt, we'll do it Monday, after school."

Aunt Lucretia glanced at him in such surprise that Archie clapped his hand to his mouth. As Herbert went out, he followed him.

"Dear me! He's bringing that boy back with him!" remarked Aunt Lucretia.

"Bert's going to stay and play with us," said Archie. "He says he'll stay to dinner, too. We'll go upstairs. Come on, Ruth!"

There was none of the tramping and stamping overhead which, on the occasion of boys' visits, usually made life a burden to the older members of the family.

The dinner manners were a marvel. Archie and Ruth came dangerously near a fit of the giggles in detecting glances of surprise, as Aunt Lucretia took note of the punctilious "Thank you!" and "If you please," with the utter absence of criticism or complaint of their food. But the giggling was as objectionable as any other improper behavior, and was resolutely held down.

"Can you two play with little Harry for a while this afternoon?" asked mamma, after Herbert had gone. "I hear that old Mrs. Morrow is ill, and I must go and see her." Archie's face clouded.

"Can't Jane?" he said.

"Jane has her Sunday baking to do."

"We wanted to paste pictures this afternoon."

"I'll see to Harry," said Aunt Lucretia. "Then he won't be teased."

"We'll do it," said Archie, hastily. "We'll give him some pictures, and let him paste, too."

"He would get the paste all over himself," objected mamma.

"Then we'll do something else," said Archie, bracing himself to it with the reflection that, if ever the "truly virtuous" point could be reached by a boy, he was reaching it now.

As supper was over, the sun came out with its brightest rays.

"It wasn't to tell us it's sorry it hasn't done better by us today," said Archie.

"No; it's promising us nice things for tomorrow," said Ruth.

They ran out to the garden, revelling in the shining trees and freshly washed flowers.

"Look at the beauties!" They came back with their hands full of pansies.

"They want to tell you they're glad of the rain, Aunt Lucretia," said Archie, carrying her a share.

"And that they've had a happy day," said Ruth.

"We've all had a happy day," said Aunt Lucretia, turning upon him the loving smile which the flower gift had called to her face.

"You have been dear, good children," said mamma.

"Yes, it's they who have made it so," said Aunt Lucretia. "It has been a real comfort to have them at home."

A hot flush arose to Archie's face. He gazed at his sister in shame-faced surprise, mingled with an expression which said as plainly as possible.—

"What are we to do now?"

The look which met him was as troubled. For a moment he stood silent and conscience smitten, then burst out, his words tumbling over each other:

"O Aunt Lucretia, you mustn't say so. We haven't been trying to be good. I mean—we haven't been good just to be good—No, I mean—"

"Well, what do you mean?" said his aunt, as he came to a dead stop.

"I mean—it was awfully mean, but—we did it to spite you!"

"What have you done to spite me?" asked Aunt Lucretia, gently.

"We've—been good—all day—because—because we said you'd rather scold us than be pleased with us. And it was a shame, and we're—"

"Sorry," put in Ruth, tearfully.

"That's enough about it," said mamma, coming to put an end to the trying situation. "You are going to try now how good you can be without any spite along with it."

Just before going to sleep, Ruth whispered across from her bed to Archie's:

"Aunt Lucretia kissed me so hard when she said, 'Good-night!' that I don't believe she means to scold us any more—"

"Don't let's do anything to make her," put in Archie.

"And she said: 'You dear little thing! I believe there's some truth in it!' What did she mean?"

"In our being spiteful. I s'pose," said Archie. "But, I tell you, I don't think it's very much credit to us that she's so astonished when we're good all day."

In which Ruth agreed.—Christian Register.

SCIENTIFIC.

—Cherrapunji, in Assam, northeast of Calcutta, has the reputation of being the wettest place on the earth, the average annual rainfall being 493.15 inches, while it has the record of one month in which 147.17 inches fell.

—There are eight inches more rainfall annually on the south shore of Lake Superior than on the north shore, and three inches more in the cases of Erie and Ontario. There is also a greater precipitation on the eastern shores of Lakes Huron and Michigan than on the western.

—An English authority on dentistry, quoted in the British Medical Journal, condemns in strong language unwarranted teeth extraction. He states that "teeth drawing is not dentistry, and the supply of artificial dentures should no more be regarded as the chief aim of dentistry than the supplying of wooden legs is looked upon as the ideal of surgery."

—The experience of France and Spain has proved conclusively that American vines are the only remedy for the phylloxera. But the German agrarian war upon American agricultural products has been carried to the point where the Alsatian Government prefers phylloxera and has excluded American vines. Perhaps the Germans will use American vines themselves, while permitting the phylloxera to ravage the vineyards of a conquered province.

THE HORSE.

The Index to a Horse's Character.

Many persons in forming opinions as to the character of a horse regard the eye as the feature above all others which tells the tale, but our investigation of the subject has led us to somewhat different conclusions, and experience with these animals has caused us not to place too much reliance upon its expression in deciding as to its vicious traits or docility. Notwithstanding that the examination of the eye is almost an inborn habit in judging the character of the creature, yet it seems that this particular feature is often overestimated.

We have known persons to condemn horses on account of the appearance of their eyes, saying, "I never feel safe with a horse which is always turning the whites of its eyes at me," but closer inspection would have shown the ivory white to be the result of absence of the coloring matter in a part which is usually of a darkened hue, and was really the natural condition of things rather than a vicious habit. This deviation from the ordinary course of nature produces a variety sometimes called "watch eye," occasionally confused, however, with another kind called "wall eye"; and here it may not be out of place to explain the difference between these two peculiar conditions.

The former appears as if illuminated by the contrast of the ivory white surrounding that part of the eye frequently called the sight, which in its turn may be almost black. This somewhat singular arrangement of things gives the organ the appearance of being ever on the outlook, watching, as it were. Some horses have both eyes constructed on the watch-eye plan, and it gives the animal a rather wild expression, when in point of fact it may be a very docile creature.

The wall eye, on the other hand, is a condition due to the absence of coloring matter, this time in the interior of the organ, giving it a bluish or steel-gray appearance, which is a striking contrast to the soft brown eyes so often noticed in horses.

It must not be inferred that the eye should be entirely disregarded in forming an opinion as to the character of a horse, but it should be remembered that its expression is materially influenced by the attitude of the ear, an organ which is often lost sight of as far as being an index to the animal's character is concerned.

Our experience in judging horses has led us to regard the ear with much care, as its attitude and movements indicate quite a variety of conditions; horses whose ears are ever restless without apparent cause are frequently ultra-nervous creatures, well worth watching. Again, the restless ear will sometimes point to defective eyesight, which may be accompanied with partial or total loss of vision, while animals which throw them closely back upon the poll are often inclined to nip or bite. Indeed, this very attitude is frequently a signal for combat.

On the other hand, horses whose ears are kept nearly in the same position most of the time are more than likely to be dull, stupid creatures, if they are not totally deaf. Deafness in horses is not at all a common thing, though we occasionally meet with cases in which the animal's attention cannot be attracted by sounds.

The ear of the horse is not only a partial index to the animal's character as far as vice and docility are concerned, but its movements will at times sound the keynote of danger or warn us to be on the alert. In this connection a somewhat remarkable incident was related to a writer a few years ago by one of the Union soldiers who escaped through that famous hole of Libby Prison, but was afterwards retaken. The officer who recaptured the man subsequently informed him that his proximity was first revealed by the ears of his (the officer's) charger.

The story in brief was that the escaping soldier and a messmate were concealed in a wood. One night they were closely pursued by the Southern officer and his men, and while stealing away from them as cautiously as they could, the crackling of the dry leaves attracted the attention of the captain's horse, which somewhat suddenly and without apparent reason pricked its ears and seemed alarmed. The officer, taking the hint, ordered his troopers to surround the spot, and by the morning he had the two fugitives closely corralled.

Another feature concerning the ear of a horse, and sometimes taken advantage of to illustrate the intelligence of the animal, is the attitude it assumes under certain conditions. Thus we find trainers of trick horses in the circus ring presenting a magnificent animal to an audience, and he tells them that it will do exactly what it is commanded, without manipulation or sign from him. To prove his assertion, he will stand out of sight of the horse and command the animal to throw its ears forward, which is immediately done, the horse presenting a noble, picturesque appearance at the same time.

The act is accomplished, however, through the assistance of a member of the band, who rattles his sticks upon the snare drum. The horse, facing the drum, will immediately throw its ears forward. The audience usually applaud, and the horse gallops around the ring a time or two, but the trainer takes care that he brings it to a halt with its rear toward the band or place where the noise is to be made, and then commands it to throw its ears backward, when the rattle of the snare drum or some other noise will attract the horse's attention from behind and the ears will be thrown backward to collect the wave of sound coming from the rear. The audience again applaud and the horse gallops around the ring.

On being brought to a halt, the trainer announces that the horse will now throw one ear backward and the other forward on the word of command, but explains that this is a very difficult act for his pupil to perform, and so it appears to be. It is accomplished by having counter sounds diagonally across the horse and on opposite sides of the ring, one to attract the right ear, the other the left. Unless the two waves of sound are in the proper direction the act will not be properly accomplished; but after a trial or two the manipulators of the drums will eventually get into position, and then the horse will throw one ear forward, the other backward, which invariably results in much applause.

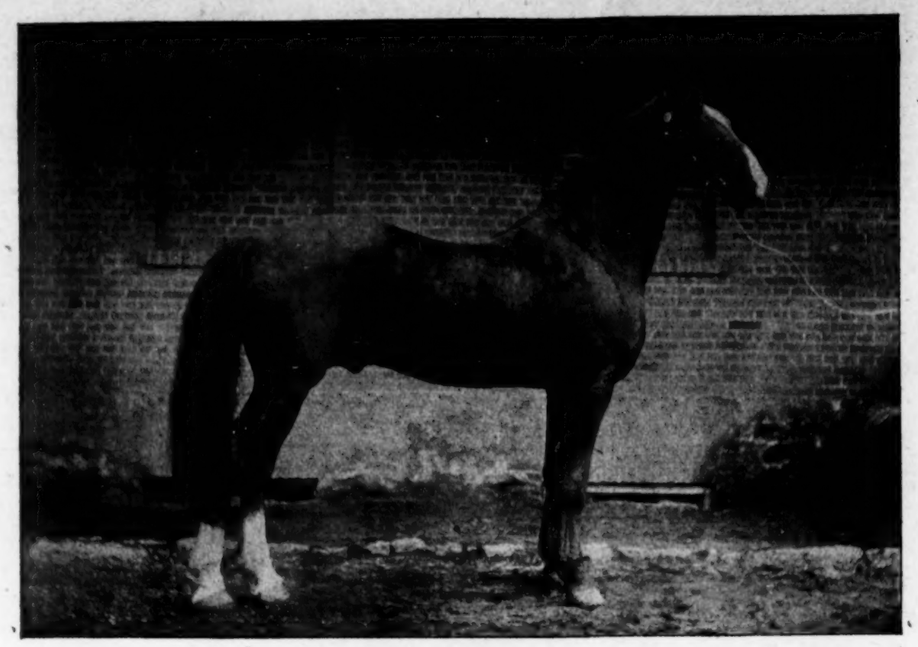
It may be well to say at this point that the part we call the ear has nothing to do with the function of hearing; it is simply an appendage, one of the duties of which is to collect waves of sound as they pass through the air and direct them to the internal ear, where the essential organs of hearing are to be found, hence its mobility.

Another feature which is regarded by many as an index to the character of a horse is the color of its coat, some believing that the chestnuts or sorrels are likely to be high-strung, nervous creatures, while gray horses often get the credit of being very docile, but our investigation along this line has now led us to believe that there is no reliance whatever to be placed in opinions formed upon such a theory.

It is also contended that color has much to do with the comfort of the animal when exposed to the sun's rays, especially in the summer season, but our observations have not demonstrated the truth of this supposition, as it has been clearly shown time and again that dark horses are able to do just as much work without showing fatigue as those of a lighter color. This may be accounted for by the fact that the coat is a non-conductor within certain limits so that it probably makes little difference what color it is as far as the temperature of the parts beneath are concerned.

In studying the character of a horse, it may be well not to jump at conclusions, but observe its habits carefully, and give every link due consideration before coming to a final conclusion.—E. A. A. Grange, in New York Times.

[Careful attention should be paid to the ears, but we believe that the expression of the eye is a much surer index of character than the ear. Some vicious biters will grab a man without laying their ears back or giving the slightest indication by these organs of his intention of sampling human flesh. The ears of an unreliable horse are a most valuable index to the driver seated in a carriage behind him. When disposed to kick the ears will telegraph the warning in season for an expert reinsman who is quick motioned to divert the animal's attention by a snatch of the bit to one side and prevent him from using his heels. The courage of a horse can be determined much better in our opinion by studying the eye than the ear of a horse.—ED.]



THE MORGAN STALLION BADGER BOY.
Property of C. X. Larrabee, Home Park, Mont.

Worcester Notes.

Death, the grim reaper, has claimed from our midst another to his fold. Paul J. Henry—good, noble Paul—is dead. Dead, yes, dead! His many friends, who were wont to see him in his daily walks and receive his genial smile and shake him by the hand, will meet him no more. The noble steeds which he used to sit behind will miss his magic touch of the rein and his gentle caress, for their master is no more. His employes, from the highest to the lowest, will miss his cheery "Good morning," for the tongue that spoke those kind words is silenced forever. Dead! Yes, to the genial brothers and sisters who loved his very foot steps, especially the brother whom he always associated with and was rarely seen apart from. Paul was and has been afflicted with diabetes, but so nobly and bravely had he fought it that he had in a measure conquered it. A week ago he contracted a cold which settled into pneumonia and he passed away.

Paul Henry has been a lover of horses since his boyhood days, and as a patron of the turf he won and lost with equal good nature. He gathered together a stable of horses that could not be excelled in New England. The last time that "Old Sport" met him was at the horsemen's banquet, and he spoke about his horses, the brown mare Whirligig (2.10), the superb Delto (2.14), which he bought last summer, Correct (2.20¼), which he drove double with Delto, and Princess Flavia (2.30). Paul Henry's word was as good as gold; if he promised anything he kept his promise. He was one of nature's noblemen whose friendship was something to be proud to possess.

Paul was the son of the late Walter Henry, and was born in 1863. He went to our public schools, and later was associated in business with his brother, Michael Henry, and they were always seen together. He was a member of the Elk, the Wachusetts and the Frohsinns Club. Many will meet to see the horses win fresh laurels on the turf this season, but the genial smile of our friend will be missed, and his name create a vacancy that cannot be filled. This lover of the horse must have been of good heart, for he who has room in his heart for these dumb creatures must necessarily have that within him that passeth all understanding. The robin that sings under my window carols his lay and tells me that it is nature that we must love to be truly good, and the horse that neighs in his stall, as he looks wistfully at his master for another caress, says this is nature to be loved. Surely such a man must have a good heart, and Paul Henry had the heart of a woman. "Old Sport" can drop a tear for his departed friend, whose memory will linger long in all the hearts that knew him, and it can be truly said of him, "He was a man, and take him for all and all we shall never look upon his like again."

The last tribute to the remains of the late Paul J. Henry, performed at St. Paul's Church, Friday morning, was witnessed by one of the largest gatherings ever assembled in that edifice. The impressive service of the Catholic Church was held, and the pall bearers were friends in the Worcester Lodge of Elks. A requiem high mass was chanted by Rev. J. J. Lunney, assisted by Rev. J. H. McKeehins of the Church of the Immaculate Conception as deacon and Rev. P. H. Boland as sub deacon. The casket was covered with flowers. The horsemen of the city were well represented, the veteran George Wesson, John M. White of Millbury, Charles T. Pratt (Old Sport), E. S. Pierce, Daniel Wilkins, Chief of Police Stone, Richard J. Healey and others being present. There was a profusion of floral tributes.

The work on the new track is rapidly progressing and Contractor Hennessey hopes to be finished by the first of May so that the horsemen can work over it. The fence will be commenced Monday, so that by Memorial Day everything will be in readiness for trotting and pacing galore.

S. D. Houghton is working his string of horses on the road, while John Kervick, our John, is ready to come to the track the very day that it is ready for him.

Richard Healey is driving a hummer that has been loaned him by a friend. When he first appeared on the road great was the wonder as to who the horse was. He turned out to be George Clark with a good mark, and Mr. Healey knows how to drive him.

There is rather a dearth in horse news as spring has hardly opened yet, but later on there will be plenty of it.

The committee of the Worcester Agricultural Society has decided to offer a suitable prize for Mr. E. S. Pierce to try for with his fast pacing team *Uncle Tom* and *Major Wonder*, to establish a track record for the new track at the fair held by the Society Sept. 4, 5 and 6. At the Soldiers' Matinee last year this team smashed the old record into smithereens, and if they are in good condition and the track is right they can pace in 2.17 or 2.18. This will be a pleasing feature of the fair.

The horsemen, in fact, the road drivers are beginning to ask what is the matter with the speedway that commissioner Prior has tried to build on Mill street. It is certainly an unsightly place, and as for driving, well,—the less said about it the better. Mr. Prior seems to have a faculty for opening up streets, and then leaving them in an unfinished condition.

My friend John W. Knibbs appeared before the Legislative committee, and told some of the Boston elevated road directors, including General Bancroft, how to run cars through the Subway, but not exactly on the same track to pass one another, but very similar to it. John says that some of the Boston magnates called him "David Harum." John is now devoting his leisure time to trying to simplify how two cars can pass one another when coming in opposite directions without colliding. When he gets that demonstrated no doubt the Bostonians will accept the method, and call him "David Scare-em."

Yours, "OLD SPORT"

Notes from Providence, R. I.

The quietness that has reigned in this locality during the past three weeks promises to give way to more lively doings, for with the special meeting of the Providence Driving Association to be held this week, I anticipate that a little more life will be infused into the horsemen. Among the special business of the meeting will be the question as to whether or not we shall hold a parade. I understand that several of the horsemen are enthusiastic over the scheme, and while we may not equal the parade of the New York horsemen, we can make a good showing. Certainly it will do no harm, and may convince some of the doubting Thomases in this city that the horse owners are more than one in number. In view of the present standing on the speedway question I might go a step farther and state that a little agitation will not harm matters.

In my last letter I stated that it was doubtful if this city would be represented in New York on the fifth of May. I was talking with one owner and he said he would be in line. Possibly at the meeting a few others may follow suit. Quite a number of invitations have been received by the local owners to attend the event, and among others I hope to look them over myself. Circulars from the Road Drivers' Association from New York are finding their way to this city. No doubt quite a number of names will be added to the roll, but there is one thing I take exception to, and that is the statement that it took 60 days for us to get 1000 members. If I remember correctly, it was about five weeks. Of course we are glad to be quoted as an example of a hustling organization, but I wish that the name of our city could be included in the list of those owning speedways.

The entries to the early closing stakes for the circuit meeting in this city are out, and Secretary W. W. Dexter is glad his task is over. His hand book, containing interesting data to the horsemen, will be mailed this week. It is well worth looking over. Local horses should figure to some extent in the stake races, as there are 15 entered, including one or two new ones. Harry Lindol has named Danforth L., a bay gelding by Alfonso; dam, Gerald, by Aleyone, in the 2.30 trot. Lindol and Knapp Forshner have also entered horses in the 2.13 subscription. George Duckworth will start *Gurgles Boy* (2.15¼) in the 2.14 pace. I have not seen much of the pacer of late, but he is said to be rounding into condition in a manner satisfactory to his owner. *Winola* (2.15¼) is also in.

Levi Brown, well known as "Barney," died last week. He has been well known to the followers of the turf in this State for the last 30 years. He was a well-known figure in the judges' stand, and his name recalls to the old timers the name of two of his fastest steppers, Locust and Noontide. Barney also owned some famous road horses, and figured in more than one hot road race. His funeral was well attended, and there was a goodly sprinkling of horsemen present.

Mr. Tobias Burke figured in a law suit last week the outcome of which was hailed with joy by the horsemen of this city. Last fall, while speeding on the avenue, our "speedway," Mr. Burke was run into by a team. Prompt action actuated by coolness upon Mr. Burke's part prevented a probable loss of life. The facts of the case as presented in court were as follows: Three horsemen were speeding down the course on the extreme right. Mr. Burke was in a Goddard and was coming up in back of the three. Suddenly a horse and buggy shot into view, just missing the nigh team of the three. It was impossible for Mr. Burke to escape the buggy, and with rare presence of mind picked up his horse and threw him to the off side. This brought the horses side on. The nigh shaft of Mr. Burke's buggy struck the other horse disabling it so that it had to be killed. Mr. Burke was pinned to his seat by the dasher of his buggy, and it took some time to extricate him from his position. His legs were badly injured and he was generally well shaken up. His horse was not injured, which seemed to be of more importance to Mr. Burke than his own personal safety.

The party in the team then brought suit for $500 to recover for loss of horse, buggy, etc. It was clearly shown that had the plaintiff not been speeding up the avenue on the wrong side, and had he, when he saw the coming teams turned completely to the right, instead of half way, the accident could have been avoided. The counsel for the plaintiff submitted the case without argument, and the jury brought in a unanimous verdict for the defendant with costs. The case was watched with interest by the horsemen.

While out on the avenue, our "speedway," I dropped in to see Charles Rowan, who is well known in this section as a successful trainer and driver. Rowan has had quite a number of horses in his care during the winter both at his own stable and at Sandy Fenner's. Both places are at the head of the avenue. At present Rowan has five head under his care, and he expects a sixth horse this week. All are in good condition, having been given road work during the last month or so. Strange to say there is not a pacer in the string. Miss G., a bay mare with a mark of 2.27½, heads the string. Rowan says she will be able to step in fast time this summer. Lampton, a six-year-old trotter without a mark, will also be campaigned.

Lucy Simmons, by Simmons, dam by Stamboul, is considered a likely candidate for the slow classes in which she will be entered. There is also a likely two year old bay filly in the string by Conroy, by Constantine. Mr. De Frey of Newport, whose horses are handled by Rowan, has a bay colt out of *Lantana* (2.09¾). *Lantana* was formerly owned by Mr. De Frey, who sold her last fall to Frank Slavin. During the summer she was at Rowan's Stock Farm. Gordon Cummings (2.19¼) is expected this week, after which Rowan will make his headquarters at Collingwood's half mile track at Hillsgrove, where the string will be conditioned for the half mile rings and big rings.

Rowan sold *Lucky Boy* (2.17¼) last week also Dan Robinson to New York parties.

Joby Hobson, whose stable is opposite the Narragansett track, has a head of five belonging to out of town parties. Judge Cosgrove (2.14¼) is among the string.

John Collingwood has about 27 head quartered at his track, which has been uncovered, and horses are being jogged on pleasant mornings. It is probable that a spring meeting will be held at the track. "STROLLER"

A Successful Trial.

BRIGHTON, Mass., April 24, 1900.—Miss B. Baxter of Faneuil, who was a sufferer from stomach trouble, saw in a paper a testimonial from one who had been cured of dyspepsia by Hood's Sarsaparilla. She began taking it and is now well, and has gained in weight. She says when people say they don't know what will cure them she tells them to take Hood's.